

K. British Wine.

8036

Vinum Britannicum:
O R, A N
E S S A Y
O N T H E
Properties and Effects
O F
M A L T L I Q U O R S.

Wherein is considered,
In what Cases, and to what Constitutions,
they are either Beneficial or Injurious.

W I T H
A Plain Mechanical A c c o u n t, how they are
serviceable or disserviceable to Human Bodies.

By a Physician in the Country.

*Quorum Usus, nisi nimius, aut intempestivus, non
nocet, vituperanda non sunt.*

Sennertus.

L O D O N:

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TO THE
READER.



So much hath been said and written of late, in Praise of Simple Element, so Wine and Malt Liquors have had their respective Patrons, and in some way or other been recommended to the Publick. But it is to be wished these learned Writers had less affected the Panegyricall Way, and written with less Attachment and Prepossession. Every one seems to have a darling Liquor, which he is disposed to commend and celebrate

*at the Expente of all the rest. This he extols to the Skies; and having thoroughly considered it, finds it highly beneficial in all Cases, and upon all Occasions. That it is suited to all Constitutions, and adapted to the Cure or Prevention of all Diseases. In short, that it is good for every Thing. And when he has demonstrated this Point, he proceeds with great Ease and Satisfaction, to prove all other Liquors good for nothing. That the best of them are insignificant and worthless, and the rest very injurious in General, and in some Cases little less than poisonous. All this while the intelligent and unprejudiced Reader remains dissatisfied, and cannot believe one Word of the Matter, as well knowing that every Liquor is, and must be both Good and Bad; that it is wholesome or prejudicial, according to the Cases and Circumstances wherein it is used: And whoever represents it otherwise, loses his Time, and abuses his Readers Patience. On the other Hand, if the good and bad Properties of each Liquor were fairly set forth, and the forementioned Circumstances pointed out; so that every one might discover what would be safest and best for him, and learn
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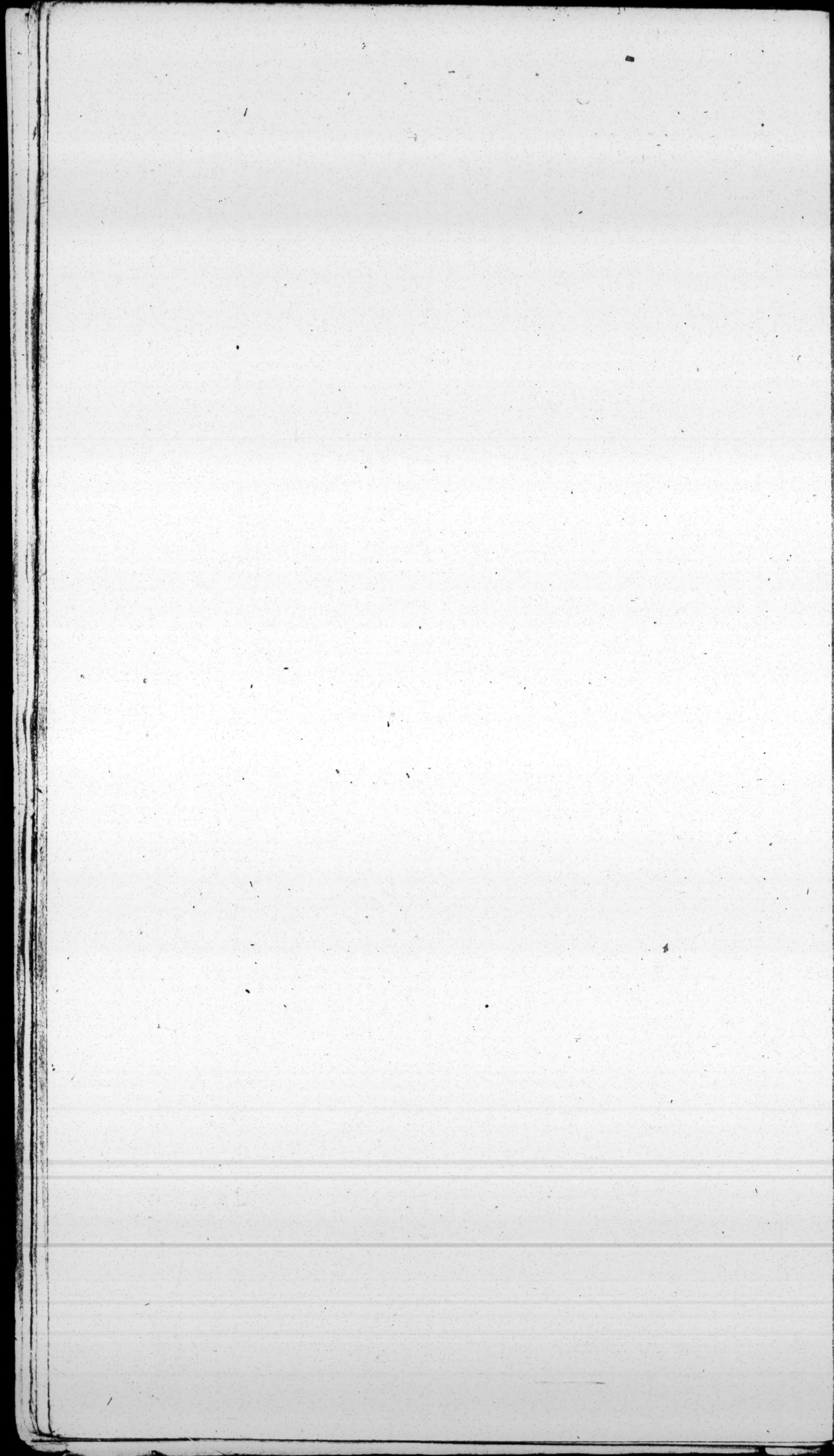
the proper Seasons and Manner of using it; I doubt not but both the Writer and Reader would find their Account in it, and that it would redound to the Credit of the former, as well as the Pleasure and Advantage of the latter.

I have singled out Malt Liquor from the rest, merely for the two following Reasons. The one is, that it is the common Drink of the Nation, insomuch that a vast Majority seldom touch any other. And the other Reason is, that notwithstanding this general Use, it has been of late in a particular Manner depretiated and vilified. And indeed if it deserved so ill a Character as hath been given it, whatever Revenue it may bring to the Crown, I am persuaded the Legislature would soon prohibit the Use of it: They would never suffer it any longer to make such Havock among the good People of this Land. But however private Persons may be deluded or led away, in Pursuit of a fanciful Hypothesis, nothing of this kind is to be apprehended from the Wisdom of the Nation. Let our Virtuosi start as many new Speculations as

they please, our Senators will be guided by Experience ; which informs them how little Reason Britain has to envy other Nations their Liquors, or grow weary of its own. Let the Delicate, the Indolent, the Sickly, be accommodated as their Physicians or Inclinations shall direct. To the rest, a more agreeable or more useful Liquor will not easily be found, than what is extracted from our own Grain, which for that Reason ought to be doubly valued by us. Do we not find it in Fact of singular Service to our Husbandmen, our Artificers, our Soldiers? Where shall we find Men in these Employments more patient of Toil, more active, more vigorous, more spiritfui than our own? 'Tis owing, in a great Measure, to the Strength of this Liquor, that our stout Countrymen are capable of out-working, and out-fighting any Nation under the Sun. And though the richer Liquors of some neighbouring Countries give great Alacrity and Briskness for a Time, yet how soon is it over? How quickly are the Spirits of the Grape evaporated, in Comparison of those which are produced from our Barley? Let a Military Foreigner enter
the

the Field, his Veins flowing with Burgundy and Champaign, With what Fire and Fury will he charge the Enemy? But in a short Time his fine Spirits are drawn off, and you find the Man almost reduced to a Caput Mortuum. Very different are the Effects of the Englishman's Ale and Beef. His first Attack may perhaps be phlegmatick enough. But as he grows warm, his Vigor increases; after which he holds out an incredible Time, and his Perseverance is as remarkable as his Courage.

If the Wine-Drinkers Abroad accuse our Liquor of rendering us obnoxious to Coughs, Consumptions, and Dropsies, it might be sufficient to retort upon them their Gout, and their Stone. But in Truth, where our Stamina are not Faulty, we must either be very unactive, or very intemperate, before these Distempers can take hold of us; as will more particularly appear in the following Papers.





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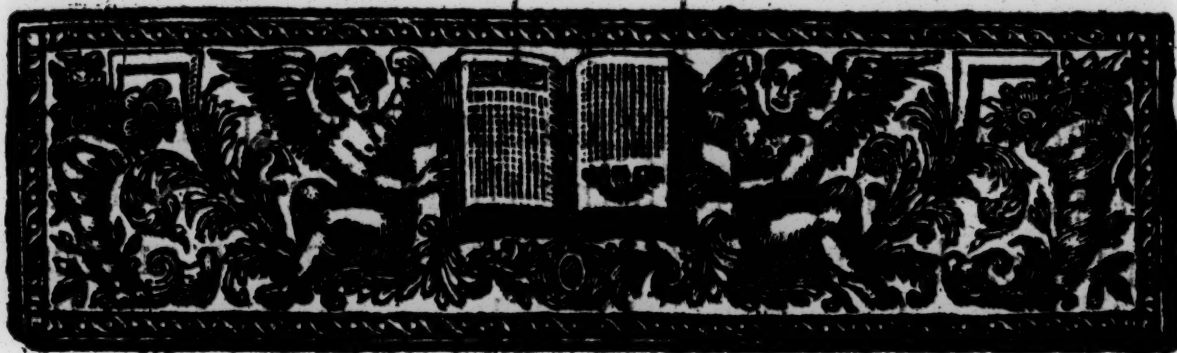
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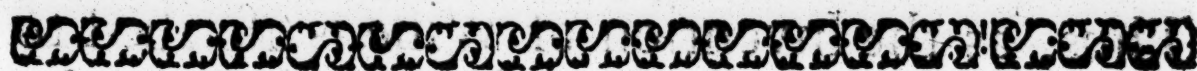
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Vinum



Vinum Britannicum, &c.



CHAP. I.

Of the Antiquity of Malt Liquors.



THE Art of Brewing, or extracting fermentable Liquors from Grain, is generally thought much more modern than that of pressing and preparing Wine from the Grape: as this latter is commonly reputed less antient than perhaps it really is. *Buchanan* in his *Scotch History* makes mention of the Use of that Liquor very early in that Country, and calls it *Vinum ex Frugibus corruptis*. *Galen*, who liv'd at *Rome*, and flourish'd in the Reigns of *Antoninus Pius*, *Antoninus Philosophus*, and *Commodus*; and *Dioscorides*, who was familiar with *Mark Anthony* and *Cleopatra*, were neither of them Strangers to Ale: but it must have been Ale unhopp'd, and ill ferment-

B

fermented : For they charge it with injuring Mens Health, prejudicing their Heads, Nerves, and membraneous Parts; vitiating the animal Juices, and causing a Drunkenness more obstinate and painful than Wine. *Herodotus*, who wrote five hundred Years before Christ, ascribes the Invention of Brewing to *Isis* the Wife of *Osiris* in *Egypt*, who liv'd many Ages before. This *Osiris* some learned Writers will have to be the same with *Misraim* the Son of *Cham* : Thus, as the Invention of Wine is ascribed to the Grandfather *Noah*, so is that of Ale to the Grandson *Misraim*.

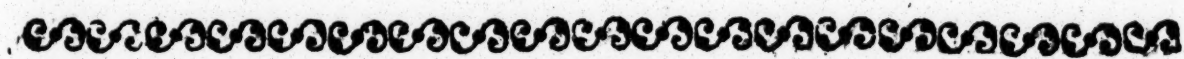
But in truth it seems hard to prove, that either of these Liquors was unknown before the Flood. *Noah's* applying himself so soon after it to the Plantation of Vines, seems a plain Argument of his being acquainted with the Use of them before. Nor in all likelihood would this ever have been question'd, if it had not been for *Noah's* sudden Intoxication. It is suppos'd, that so wise, and so good a Man, if he had known the Nature and Effects of Wine, would not have fallen into such an Abuse of it; especially at a Time when he had seen the Irregularities and Vices of Mankind so severely punish'd. But this Argument will have small Weight, if we consider that *Noah's* Inebriation might easily be owing to a very different Cause. We may justly and naturally conclude, that the Earth must have been prodigiously enriched by the Flood; and by consequence those Vines which the Patriarch

arch made use of at that time, might be much richer and fuller of Spirit than what he had before been accusom'd to. Not aware of this, he might easily intoxicate himself by going only his usual Lengths. Many other Circumstances might concur in producing that unexpected Effect, without supposing the good Man guilty of Excess, or ignorant of his Liquor.

Nor does it appear, that all Kinds of Malt Liquor were unknown and uninvented before the Flood. The Probability seems rather to lie the other way. We are plainly informed, *Gen. iv. 22.* that *Tubal Cain* understood the Metallurgick Part of *Chymistry*. And why might he not equally understand *Fermentation*, which is a Branch of Chymistry much more easy and obvious than the other? To the Invention of this, Men might be led by mere Accident. Ripe Corn, either laid or cut down, swells and sprouts like Malt in the Couch or Cumm-heap. And when it is dried, and ground into Meal, it is difficult to be made into Bread; will scarce bake, or stick together, and has a maltish Taste. Water poured, and standing on this Meal some time, tastes sweetish like Wort; and will ferment of itself, and become a *Galen's Ale*. It may therefore be supposed that Men would early be directed, either by Art or Accident, to so obvious an Invention.

To which may be added, that if we consider the Lives and Manners of the Antediluvians, we shall find just Cause to suspect, that

they were not confined to simple Element. 'Tis probable, their Passions were heated and agitated by more spirituous Liquors; at least, nothing could be more likely to produce that *Violence* with which *the Earth* was then filled. It is confess'd, such Considerations as these do not prove that Malt Liquor was in Use among the Antediluvians; but yet they seem to afford sufficient Grounds for a reasonable Conjecture.



C H A P. II.

*Of the Effects of Fermented Liquors in general,
and the Manner how they are produced.*

THE following Effects upon human Bodies are common to all thoroughly fermented vinous Liquors.

1st, When drunk they heat the Body. Tho' the Barley whereof the Ale or Beer was prepared be very cooling, yet the fermented Liquor drawn from it warms the Drinker, *i. e.* it gently stimulates the Solids, and by consequence accelerates the Circulation of the Fluids. For should Malt Liquors or Wine give no Irritation, nor cause any greater Contraction of the animal Fibres; such an Increase of the Blood's Quantity would be an Addition to the Resistance of the Fluids against the Solids,

lids, and so lower the Pulse, instead of raising it. It also increases Circulation and Heat in the Body, from the Attrition and Attenuation of the essential Oyl, and Salt of the Barley, in the double Fermentation; whereby these two Principles, which lay dormant in the Barley, are set at Liberty from the mealy and earthy Parts of the Grain, and become a subtile and volatile Spirit, easily digested by the Body's Heat. They become also animal Juices, and add new Vigor to the Body; some affording fit Matter for Apposition to the Sides of the decaying Vessels; others giving a cementing Matter, to join the fundry constituent Parts of the Solids of our Bodies together.

2. If a Man continues to drink more after he is heated, it raises in him a Briskness and Vivacity greater than usual; *i. e.* the increased Circulation of the Blood over the whole Body, and the Subtilization of the Spirits of the Liquor thereby, make its finest Parts run with greater Velocity over the Glands of the Brain; and cause a fuller Repletion of the Tubes with animal Juices, which flow plentifully into the Fibrils of the Muscles. Hence a stronger Disposition in the Person to Action, Motion, and Pleasure.

3. If the Man has not Power to refrain from Drinking, he will be intoxicated, or become drunk, *i. e.* his Vessels will be fill'd and distend-

distended with Fluids, that the Balance of Nature betwixt Solids and Fluids will be overcome ; the latter overpowering the Resistance of the former, so as his Legs cannot bear him ; but he staggers, stumbles, or falls like one Paralytick. In this Distention of the Vessels, the Solids are relaxed, and the Blood is rarified, from the Spirits of the Liquor entring into it. And if this Rarefaction be exceeding great, the larger Vessels or Arteries are so distended, as to compress the smaller, especially the Nerves ; whereby is hindred from entring into the Heart such a Flux of animal Spirits, as is necessary to cause a vigorous Contraction, that may project the circulating Blood to the Extremes of the Body : Hence the drunken Person looks pale, from the collapsing of the Blood Vessels on the Surface of the Body. But when the smaller Vessels are very much compress'd by the larger, the Brain and Heart abounding with Capillaries, must be so much distended, as to have their Tone weaken'd, and by frequent Debauches be destroy'd ; and the great Drinker be arrested by Loss of Appetite, Indigestion, Tremors, Loss of Memory, Palsy, Apoplexy, Swimming of the Head, Convulsions, &c. Or if the Drinker's Solids be naturally very stiff and elastick, and the Liquor drunk be very spirituous, he becomes furious and frantick. If in this Circumstance he goes to sleep, he will awake either more furious and raving, or grievously afflicted with a violent Head-ach ; and that from the too great
Disten-

Distension of the Blood Vessels of his Brain, the violent Struggle of the Solids against the Fluids, and their mutual Resistance of each other, whereby the fatigu'd Vessels and Membranes are sensible of Pain. This uneasy Sensation is also from the Remains of the Salts of the Liquor in the Capillary Vessels of the Brain, stimulating the delicate Nerves and Fibres. No Liquor produc'd without a previous Fermentation can inebriate the Drinker: for Wort drunk in Plenty provokes Vomiting and Looseness, but not Drunkenness. The Effects of too much Poppy, Hemlock, or Mandrake, taken into the Body, are Stupefaction, not Drunkenness; that is, their Juices consist of gross, tenacious Parts, which sheath up the fine Parts of the Blood; whose Use is pleasantly and smoothly to promote the Vigor and Vibration of the animal Fibres, and to further Circulation. And these Spirits ceasing their delicate Sensation, the Solids play languidly, Circulation becomes exceeding slow, the Vessels relax, the Person becomes pale, stupid and senseless. Opium makes drunk by fusing and over-rarifying the Blood; so as it takes up more room, and distends the Vessels; whereby the Fibres and Vessels are relax'd, become weaker, and unable to resist the Blood.

4. The Spirit of fermented Liquors is inflammable, and commiscible with Water.

5. They promote Perspiration, if drunk in large Quantities.

6. They

6. They force Urine, not only by increasing and diluting the Blood; but by the Pungency of its Salts, gently stimulating, and causing a greater Secretion; while the Oils of the Liquor at the same time serve to relax the Passages.

7. They cause Thirst, from a speedy exhaling of the more spirituous and fluid Parts, and leaving the grosser behind; and from the Salts of the Liquor irritating and corrugating the Glands, whereby the Secretion is lessened; and also the Rarefaction of the Blood throws the greater Quantity into the larger Vessels, and compresses the lesser.



C H A P. III.

Of the Nature of Malt Liquors in general.

TO gain a more satisfying Knowledge of this vinous Liquor drawn from Grain by a double Fermentation, first of the Grain, and then of that Liquor wherein the fermented Grain was infus'd; let us take to pieces the Composition, and examine each Ingredient.

Common *Water*, which is the Foundation, or that which bears the greatest Bulk, not only in this, but in all other potable Liquors, is the sole, innocent, and proper Fluid; not only for extracting the nutritive Parts of the Grain

Grain by Penetration, Dilution, Separation, and Dissolution thereof; but for its Friendliness to our Natures, and Agreeableness to the Parts of our Blood. But this Article having of late been the Subject of so many Enquiries and Discourses, I shall pass it over.

The next chief Ingredient is *Malt*, which communicates to the Water the whole Parts of the Grain, which were prepar'd and fitted for the Nutrition of our Bodies: And these are its Essential Oyl, Salt, and some of its earthy Parts; which have been render'd very fine and minute by the Tumefaction, Fermentation, and Dissolution of the Malt in boiling Water; and after they are boil'd in the Wort, and it is put to ferment with the Yest, their Parts are still more attenuated, broken, and fitted for passing the small Vessels of the animal Body, and being assimilated to the Substance thereof. Nay, into such minute Parts are they divided, that if Ale be warmed in an open Pot, and let stand two or three Hours to cool, the whole Spirit is exhal'd and gone, and yet the Measure not sensibly decreas'd; but the Liquor is a vapid, viscid, heavy Stuff. What hinders the Evaporation of the subtil and spirituous Parts of the Wort while it is boiling, is their not being fully separated and divided, but wrapt up and bound together in a soft, lubricating, tenacious Substance; like a gross Oil, whose Particles are hook'd into one another. This thick Matter is attenuated, and ground down afterwards by the intestine
Motion

Motion and Attrition of the Parts one against another in the Action of the Fermentation, and is much of it chang'd into volatile Spirits. What remain'd of the Malt after its Fusion in boiling Water, was only a *Caput mortuum*, or an insipid, earthy, chaffy Husk, out of which all the Spirit was extracted in the Wort in Form of an Oil. And all the Salts, with some of its subtilest earthy Parts, and the Dregs which fall to the Bottom of the Cask after the Ale is tunn'd and ripe, are only the grosser Parts of the crusty Scurf robb'd of the finest Spirits; and consist chiefly of Earth, fixed Salt, Phlegm; in which a brisk Spirit is entangled.

Hop is the third thing in the Composition. It is an admirable Bitter, and strengthens the Stomach; helps it to throw off immoderate Doses of Ale. It is a great Provoker of Urine, not only by its subtilizing the Ale, but by causing a gentle Stimulation in the secretory Passages of Urine. Were it not for this, great Drinkers would be drown'd in a Deluge of Serum. Hops prevent the Viscidity and Lusciousness that Ale would otherwise have after Fermentation: they give a grateful Taste: they fine the Liquor, and hinder the Mustiness, Thickness, and Ropiness, which would make it nauseous and unwholesome: they open Obstructions of Liver and Spleen, and other Viscera; preserve the Patency and Clearness of the Vessels; hinder their being fill'd up with the Lensor and Slime of the Drink.

Drink. Their Flowers boil'd in Water are esteem'd an Antidote against Poison, and a Cure for the Itch. Their Syrup was formerly admir'd in pestilential Fevers. The Tops of the young Plant boil'd, and eaten like Asparagus, are cooling, laxative, and diuretick; and free both Intestines, Kidneys, and Viscera of any oppressive Load.

The last thing is *Yest* or Barm; a Substance consisting of a great Quantity of subtile spirituous Particles, wrapp'd up in such as are viscid. When this already fermented Substance, or Yest, is mix'd with the * Wort, it both excites sooner, and carries on more regularly that intestine Motion caused by the Occursions and Collisions of Particles of different Gravities; whereby the spirituous Part will still be striving to mount up to the Top, and the viscid ones on the contrary retard such an Ascent, and hinder the Evaporation and Loss of the Spirits. From these two co-operating Causes, the Particles extracted from the Grain will, by frequent Intercourses and Collisions be so broken, as continually to increase the more subtile and spirituous Parts; until all

* I consider Wort as a heterogeneous Fluid, whose Parts must necessarily interchange their Positions, till each has obtain'd such an Elevation, as corresponds to its proper Gravity. But this natural Disposition of these heterogeneous Parts to interchange their Places, till each obtains its proper Gravity, being not sufficient to break and separate these Viscidities, which entangle the spirituous Parts, and to prevent their exhaling at the Surface; it is necessary that some already fermented Substance be added to, and mixed with it, that may promote a regular, speedy, intestine Motion.

that is possible to be made so by Attrition, are disentangled from their Viscidities. This intestine Motion of the Liquor is both visible and audible; and this Action and Attrition of its Parts are discoverable from the Heat they raise in it, and the Froth they send up to the Surface. And that this Action is what breaks the Viscidities, and sets at liberty the subtiler and finer Parts, or breaks the coarse Oil into such small Parts, as to become a most subtile Spirit, is manifest:

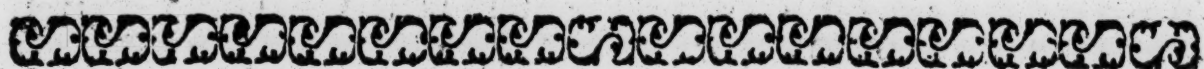
1. Because neither the Infusion of ground Barley, nor Malt, will produce any Spirit before Fermentation. For take Wort, and put it in a Still, and raise what Degree of Fire under it you please, and as long as you will, you shall not bring over any inflammable Liquor.

2. Because no Infusion of ground Barley, or Malt, is capable of making the Drink brisk, and intoxicating: But after Fermentation, the spirituous Parts of the Wort are separated and set loose, so as to intoxicate by the Smell and Vapour.

Thus we have seen the Nature, Manner, Design, and Effects of Fermentation in Malt Liquors; with their Composition, Principles, and heterogeneous Parts; and scruple not to call them vinous Liquors, or true *British* Wines: seeing they are produc'd from a domestick Grain,

Grain, or Fruit, by Fermentation, as the Foreign are from the Fruit of the Grape: And since the Effects of foreign Wines and ours are near the same; and ours serve for the same Purposes in the common Affairs of Life, as theirs do.

If, lastly, we put the fundry Ingredients of Malt Liquors together, we may observe, they afford us Meat, Drink, and Medicine. Meat, from the Corn whereof Ale is made; Drink, from the Water wherein Malt was infus'd; Medicine from the Hops boiled in the Wort. The Want of the last procured Malt Liquors the Disgrace of antient Times; as we see from *Dioscorides* and *Galen*: for then its Viscidity, Thickness, and Lubricity occasioned a Weight and Pain at the Stomach of such as drunk much of it; Flatulencies, Belchings, Crudities, Fulness, Heaviness, Sluggishness, Swelling and Hardness of the Belly, Obstructions in the small Vessels, Viscidities in the Blood, Foulness of the Glands, Paleness of Countenance: And in contrary Temperaments, it caused bilious Vomitings, obstinate Drunkenness, and Pain of the Head, Loathings, and Inflammations.



C H A P. IV.

*Of the Choice and Usefulness of Malt Liquors
in general.*

THE Account given of Malt Liquors in the last Chapter suggests the following Particulars, which the Reader may call either Corollaries or Observations, as he thinks fit.

1st, It may be observed, that the Grain communicates to the Liquor all such Parts as could be of Service to our Bodies. It affords fine earthy Parts to make up the Loss of the Bodies Solids; and an essential, subtiliz'd Oil to cement those Parts to the Sides of our Vessels. It yields its Salt in Form of a Spirit to keep up the Blood's Momentum, preserve the Action of the Vessels, and prevent Corruption and speedy Cohesions forming in the Fluids. So that the Grain itself, prepared in the finest manner, could be of no more Service to us, if eaten: for the Grains are only the Husks, which would be winnow'd or sifted from it; and the gross earthy Parts would go off the Body in Fæces.

2. Hereby we learn what Malt Liquors we should make choice of for general Use: And they

they are such as have been made of white, large, sleek, smooth-skin'd, full-ear'd, ripe Barley; which grew on Clay-ground, and has been carefully malted, and which have been brew'd with insipid, clear, soft Water; the Wort well hopp'd, and boiled till the Hops fall to the Bottom; thoroughly fermented; tunned up in an used sweet Vessel, and let stand till all the gross, viscid Parts are fallen to the Bottom, and the Liquor becomes transparent; sparkles in the Glass with small Bubbles; makes a grateful Pungency upon the Tongue; and is neither stale, nor vapid. These Malt Liquors approach near the Nature and Goodness of Wine; and are much preferable to a great deal of our common Draught.

3. Hence we are sure, that such Malt Liquors make a speedier Recruit of that Waste our Bodies have sustain'd, either by much Exercise, hard Labour, much Fasting, or some great Evacuation, than any solid Food is capable of doing. Because when we eat the most nutritious, solid Food, before it can come to nourish the Body, it must undergo the Actions of Mastication, Digestion in the Stomach, Dilution, and Attenuation there by the glandular Juices, a further Preparation in the Intestines, and Attrition of its Parts, before it can be impell'd the Lacteals, where the Chyle sent off from it has again the Action of the Mesentery, Lacteal Vessels, Mesaraick Glands, Thoracick Duct, Receptacle of the Chyle;

Chyle; and lastly, the Commixture with the Blood, and further Comminution of its Parts in the Lungs and Vessels of the Body, before it be capable of entering the finer Vessels where Nutrition is performed: For the crude Chyle, and Mass of Blood, are too thick to get into the minute Vessels, Nerves, or Lymphaticks. But the nutritive Parts of the Malt Liquor, by their double Fermentation, are broken and dissolved into such minute Particles, as some of them are instantly able to enter, and pass the delicate Tubes; afford animal Spirits and nervous Juices; and so relieve the weak, faint, weary and exhausted, almost that very Moment they are swallowed down.

4. But this shews us, that such speedy Supply must be of shorter Duration than Nourishment afforded the Body from solid Food. For the thorough Digestion, great Attenuation and Attrition of the nutritive Parts of Malt Liquors having reduced them to a Spirit, they presently pass the whole Vessels and Secretions of the Body; and those of them which are not in a few Circulations attached to the Sides of the Vessels, and assimilated to the Nature of our Solids, will quickly fly off from the Body in imperceptible *Effluvia*. But the Nourishment we receive from solid Food requires a gradual and longer Digestion and Attrition by the digestive Powers, to separate it into such minute Parts, as are fit for Apposition to the Sides of the Vessels, instead of those
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worn off and lost; and to repair and keep up the Body's Strength and Bulk. They are prepared and assimilated more slowly; and still some new Parts remain for several Hours to be reduc'd to a proper Figure and Bulk; and consequently their Expence must be less, and the useless Parts of them chiefly will be expell'd the Body, and little of their spirituous Parts will be lost.

5. Here we have the Reason, why a clear small Malt Liquor drunk to our Victuals agrees better with most Constitutions, than only simple Element: For a thin, fine Table-Beer carries sufficient Fluid into the Stomach for diluting and macerating the Food eaten; which is the only Reason alledged in favour of Water's Preference. And even this Liquor is impregnated with many nourishing Particles of Grain, which immediately pass into the Body, refresh and strengthen it, till the solid Food be digested. And on this Account, he who has such a fine Diluter, tho' he ordinarily eat less solid Food than he that is accustomed to simple Element, yet may be said to have eaten a larger Meal. The small vegetable Salts in this Liquor will also give a gentle *Stimulus* to the digestive Faculties; so as to make them act with more Vigor and Briskness, and promote Digestion, Secretion, and Evacuation. These minute Salts in the Liquor, join'd to those of the Food, will contribute something towards securing the Vessels

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and Glands from a very adhesive *Mucus*, as simple Element does it by Dilution. On this Account is such clear, well-hopp'd, ripe Beer very serviceable in cachectick Bodies, who have lived temperately, but have had the Misfortune of looser *Stamina*.

6. From hence also it is easy to account, why a Neglect of solid Food, and depending upon Malt Liquors for Nourishment, must at last take away Appetite, spoil Digestion, and cause Corpulency: for these are chiefly the Effects of mild Beer and Ale; and these abound with many gross oily Particles, which not being reduced to a subtile Spirit, are strain'd off by the lateral Vessels, and sent to the *Sacculi pinguisferi*. For, these going off by the capillary Arteries, where the Circulation is slow, and the Attraction of the different Parts of the Blood great; the small fat Globules approach and cleave to one another, and are repositied in the *Sacculi pinguisferi*. And this Abundance of Fat relaxes and lubricates the Fibres and Vessels, impairs their Vigor; and also the spirituous Parts of the Liquor quickly evaporating, the viscid are continued in the Blood, furr up the Insides of the Vessels with a *Mucus*, or Slime: so that the Increase of the Body's Bulk, as to the whole Habit in corpulent People, depends not upon the Increase of the Solids, but on their Vessels being extended and filled with the congested stagnant Humours of Fat and Slime. Which increased Bulk

strengthens not the Body, but is troublesome; weakens and suffocates it. And not only are the Fibres of the Stomach relaxed, like the rest of the Body; but its wrinkled Coats and Folds are lined with a thick slimy Matter, which both absorbs the glandular Juice, and renders it viscid, and unfit to penetrate the Food, and separate and dissolve its Parts; and lying between the Stomach and the ingested Food, the Strength of the Stomach is exerted on this *Mucus*, instead of breaking and digesting the Meat.

7. From hence we may see the Reason why Chyle prepared in the Stomach from Grain and Flesh of Animals that feed on Vegetables is always white; but the Chyle from Ale, Beer and Wine, is not. For all white Chyle is from a just Admixture of the gross Salt, Oyl and Phlegm: therefore all Emulsions are white, and Chyle made from Grain is of the same Colour. But when the Salt, Oyl and Earth of the Vegetable is divided, and the two first subtilized into a Spirit; then is the Chyle of the Colour of the Liquor.

8. Hence learn we the Reason why Malt Liquors, moderately used, are of great Advantage to the hard Labourer; for they inspire him with new Life and Spirit, when he is weak, faint, and almost exhausted by Labour. They are also a Nourishment to him, when either the Warmth of the Weather, or

Heat of his Body has impair'd his Appetite and Digestion. They are a Supply to the low Diet, and mean Provision of the Poor. And at Night, when his Solids are relax'd by the great Expence of animal Juices through the preceding Day's hard Labour, and the Evening Cold comes on, and shuts up his Pores, and obstructs the perspirable Matter in the excretory Ducts, and the thinner Part exhales, and leaves the grosser to clog up the Passages; then a moderate Cup drives away the Sense of Pain, raises the drooping Spirits, quickens and strengthens the languid Pulse, promotes Perspiration, and frees the Blood from that Matter which is apt to stick in the excretory Ducts. The hard Labourer may dispense with a reasonable Quantity of the strongest Malt Liquors; for his constant Action breaks the Viscidities of the Drink into good Nourishment, and thereby makes amends for the Meanness of his Diet. And as the fine earthy Parts of the Grain are easily converted by him into good Nourishment, so its oily Parts are of use for lubricating the Fibres, and disposing them the better for daily Action: As likewise they prevent their over-heating, and their too violent Attrition.

9. Lastly, it ought to be observed, that Malt Liquor, especially that which is strong, is injurious to the Sedentary and Valetudinary of all Constitutions; because it abounds with Viscidities, and by consequence requires a
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great muscular Force, and much Action, to attenuate it, in order to make it pass the Secretions of the Body, without leaving a Mucus upon the small Vessels to obstruct them; or depositing too great a Store of oily Particles in the Body, to relax and weaken its Solids, before it come to the several Shores of Evacuation. Whoever therefore labour under any Chronical Distemper, or are very unactive and averse from Exercise, must be directed to more proper Liquors. But I must take Notice, that this no more tends to diminish the Value of Malt Liquors, than that of strong Food; which must be forborn by the same Persons for the same Reasons.



C H A P. V.

At what Times of Life, and Seasons of the Year, Malt Liquor is the safest and most proper.

IT would be a dangerous Practice in Parents, to indulge their Children in the Use of these Liquors; considering the Laxness of the Solids in Infancy, and the great Quantity of Fluids. All Malt Liquors having so much Viscidity in them, that they would certainly produce the same Effects as a viscous or tenacious Food; *viz.* Oppression, Weight, Pain, Indi-

Indigestion, Wind, Belchings, Acidities, and Crudities in the Stomach, and in the Body; Sluggishness in the Belly, a furring up of the Insides of the Intestines, and small Vessels; Obstructions in the Glands, and curdling of their Milk; and by consequence, Sickness, Gripes, and Looseness: And all these, especially if the Drink was Unhopped, or half Fermented, New, or Musty. Or was the Liquor full hopped, well fermented, and clear; then are its Salts stripped of that Coat wherein they were wrap'd up; then do they cause Thirst, Coagulation of the Humours, Pains, Tremblings, Weakness, Obstructions, Inflammations, Convulsions, and fundry Sorts of Fevers. The Viscidity of Malt Liquors, and the Imbecillity of the Child's Solids, will hinder their due Digestion, and necessary and timely Evacuation. Hence a Plethora, with the Diseases which proceed from it. But these bad Effects of Malt Liquors in Children, are chiefly from their Incapacity for such Labour and Exercise, as might digest the otherwise harmless and healthful Liquor.

Neither is its Use in the first Stages of Youth adviseable: For it forces the Increase and Growth of the Body, and turns Youth into Manhood. It also exposes the Body to the Mercy of all those Diseases, which arise from too much Blood, and abundance of Humours. Not to mention that it is apt to encourage and excite the Passions too much. Too early used,

used, it likewise often occasions Stone, Gout, Gravel, Coughs, and Consumptions.

I would further advise to a sparing Use of all Spirituous Liquors for a Year or two after Growth is at an End. For the Elongation and Enlargement of the Vessels being then over, such Persons are then peculiarly exposed to Diseases from a Plethora. Accordingly we find in Fact, they are more liable to Inflammations, Fevers, and Consumptions, at that Time, than afterwards. In Manhood these Liquors are unquestionably the safest, the Body being then most Vigorous, and best able to concoct and carry them off in Perspiration, upon the Account of that higher Degree of Labour or Exercise, which generally accompany that Age. At the same time it must be granted, that Old Age, in a particular Manner, requires the Assistance and Benefit of Spirituous Liquors, that Circulation may be kept up, and natural Heat preserved; that the Nerves and Vessels may be supplied with proper Juices, and the several Secretions promoted. But though old Men stand in more Need of a moderate Quantity, yet they are more injur'd by Excess, and are therefore doubly concern'd to guard against it.

If it be here enquired, whether Malt Liquors be so proper for Old People as Wine? I Answer, that this Point must in a great Measure depend on their respective Constitutions and Customs. Besides, each Liquor has its
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Conveniencies, and its Inconveniencies. That of Malt is very apt to increase that Phlegm which old Folks are so much subject to; as Wine contributes to lessen and prevent it. On the other Hand, Malt Liquor seems better adapted to keep the Nerves supple, and prevent that too great Dryness and Tensity of the Fibres, which is the Effect of old Age; as most Wines contribute to increase it. Perhaps it would not be a bad Rule for old People to drink Wine in moist Weather, and Malt Liquors in dry. I shall only add, that those old Men who adhere to Malt Liquor, ought to take special Care to avoid that which is new and viscid; and the Wine Drinkers, to deal chiefly in such Wines as are soft, smooth, and mellow, except where some particular Circumstance indicates the contrary.

Much Malt Liquor, or indeed any other that is strong and spirituous, is very improper in Summer, and hot Weather. For the Pressure of the circumambient Air being abated, the Particles of Air contained in the Blood, unfold their Spring, and force the Blood to possess a larger Space than it filled before: Wherefore it will be rarified into much larger Dimensions. The Solids, at the same Time being relaxed by the Heat, the Diameters of the Vessels and Lymphatics will be enlarged, and render'd passible by the more saline, viscid, or even globular Parts of the Blood. For although the Air be rarified, and the Vessels dilated, yet is not the Blood more fluxile;
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but its Globules being blown larger by the contained Air, upon the diminished Pressure of the Atmosphere, it will become less fluid, and unsuited to pass the capillary Vessels. And therefore the Blood in this rarified and less fluxile Condition, being got into the Tubes of the relaxed Capillaries, and thence into the secretory and excretory Ducts, its fluid Parts will presently fly off; the grosser remaining, and depositing a slimy Lensor on the Sides of the Capillaries, and the Orifices of the Glands, and more complicate Arteries, and producing Fevers intermittent, and remittent. If the Air be very hot and moist, a liberal Use of this Liquor will quickly dispose the Body for malignant and putrid Fevers, from the Dissipation of the Blood's Serum through the Skin, and the Retention of the thicker and more viscid, which is unfit for a regular Circulation. If the Air be hot and dry in Summer, and Spring, ardent Fevers and Inflammations will be likely to overtake the Drinker. Now seeing such are the Effects of hot Weather on human Bodies, how much worse must the Case be, when we take into our Stomachs large Quantities of a Liquor, one Part whereof is very spirituous, and another very viscid: The first of which will soon exhale from the Body, because of the Fineness of its Parts, the Laxness of the Pores, and Patency of the Vessels; and leave the other Part behind, to taint the whole Mass of Blood, dispose it to greater Combinations and

Cohesions ; and increase the slimy L^{entor} in the Vessels, and the Dryness and Irresolvable-ness of the Mass. Hence intermittent, remittent, nervous, pestilential, malignant, ardent, slow, putrid, and inflammatory Fevers, &c.

Therefore to prevent these Dangers, it is necessary that the Malt Liquor drunk in hot Weather be only a middle Beer, ripe, transparent, and pungent, neither vapid nor sower, nor thick and musty ; drunk especially towards the Evening, that it may revive the Spirits, and at the same Time nourish the Body. When the Stomach is not able to digest a necessary Quantity of Meat, this quickly makes up the preceeding Days Loss. But great Care should be taken in the Use of strong Beer ; for the stronger, the more viscid it is, and the greater Load it lays upon the Vessels, and disposes to some Illness. And as Excess ought resolutely to be avoided at all Times, so more especially in a hot Season. For besides all ill Consequences of an inflammatory Nature, it throws the Blood into such a State of Viscidity, as renders Dilution almost impracticable. And at the same time the Nerves are doubly relaxed. Hard Labourers may safely drink Ale at any Time of the Day, if they be not immoderate ; for its Viscidity is so far from being injurious to them, that it is ground down by the long and great Action of the Muscles, and turned into Nourishment. I shall only observe further,
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that Travellers of long Journeys in hot Weather, should use Ale and strong Beer very sparingly, seeing that their Riding promotes Perspiration, and a copious and speedy Discharge of the thinner Parts of the Blood, and by Consequence disposes the rest to Inflammations and Fevers.



C H A P. VI.

Of the Differences of Malt Liquors.

HAVING hitherto considered Malt Liquor in General, I shall now make some Enquiry into the particular Sorts of it.

Malt Liquors differ in respect of the *Grain* whereof they are made. Thus Pease, Beans, *French* Beans, Chick Pease, &c. afford a more tenacious, heavy Liquor, and such as requires a stronger Constitution to digest them. Wheat and Barley produce more nourishing and strengthning Liquors, seeing their Parts are more separable, and sooner reduced to a wholesome Spirit. Oats yield a more detestive kind of Drink, which is less viscid, has more earthy Parts, and a smaller Quantity of Oil in it.

Our Malt Liquors are divided into *Ale* and *Beer*. The former has a less Quantity of Hop, the latter a larger. *Ale* is smooth, softening, balsamick and relaxing. The vegetable

and essential Oil of the Grain is grosser, and not so much separated and divided, as to be brought to so penetrating, subtile, and active a Spirit; therefore must this Liquor abound with a coarse Oil, a viscid Phlegm, wherein its Salts are wrapped up. *Beer*, or well-hopp'd Malt Liquor is of subtiler Parts, and its Bitterness makes it more grateful to most Stomachs. The Hops make it more spirituous, subtile, rigid, and drying. They help much to separate the more coherent and viscid Parts of the Malt. Therefore is the Liquor less disposed to run into such Cohesions as would quickly make it ropy, vapid, and sower. It is also of easy Digestion; passes the Secretions sooner, and is more quickly evacuated. All strongly hopp'd Malt Liquors have their essential Oils broken smaller, and exist more universally in the Form of a fine, subtile, penetrating Spirit, through all the Parts of the Liquor. But where the Parts of the Grain are less divided for want of Hops, the Liquor after Fermentation still retains a clammy Sweetness, and soon becomes Acid, and unfit for Drinking. For the fine vegetable Oil and Salts being still entangled, and wrapt up in the viscid Cohesions of the Liquor, its Parts will be obtuse, and taste Sweetish.

Malt Liquors differ in their Degrees of *Strength*; and the stronger they are, the greater is their Viscidity, and the more of it they carry into the Blood. Which Inconvenience

nience the spirituous Part cannot prevent: For the Spirits (as I said before) being the smallest, subtilest, and most active Part of the Liquor, they will pass the Strainers of the Body soonest, and get off first. Common *Table Beer*, and middle Ale, being smaller Liquors, have so much Strength in them, as to raise a pleasant gentle Warmth and Titillation in the Stomach; and are so thin as to dilute Food, and quench Thirst readily, and must certainly be the best in General; seeing they carry the least Viscidities into the Blood, and the least Salts into the small Vessels, to prick and pain them; and occasion not a ropy Chyle to pass the Lacteals, nor cause great Cohesions in the Blood. As *Yorkshire* is justly noted for the best Ale, so may it be taken Notice of for the worst small Beer, if that wretched Stuff called *Grout*, deserve the Name. This is nothing but the Washings of the insipid Husks of Grains, (which at that Time have nothing further separable from them, and yield but a coarse, nasty, earthy Matter,) the washings of the Brewing-Vessels, and a third Decoction of the Hops: And into all is cast the Dregs or Ground of the other Worts. Possibly some may likewise throw in the nasty vapid Stuff that is under the working Casks of New-tunn'd Ale, or under the Spiggot of the present Tap. This is such abominable Trash, that it deserves no further Notice. I shall only observe, that it is well for the poor Labourers that drink it, that they
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are Labourers, otherwise it could not fail to dispatch them in a short Time.

Malt Liquors differ in their *Colour*, being either *brown*, *pale*, or *amber-coloured*, as was the Malt from which they are brewed. The *brown* Malt is strongly dried, has many fiery Particles in it, affords a less viscid, or thinner Ale; which, unless it be very strong, more easily and quickly passes the Strainers of the Body. But this Sort of Ale, from its containing the forementioned Particles, is more apt to occasion Looseness and Gripes in those that are unaccustom'd to it, and to give Sickness and Headachs next Day. But it is a very great Error to make either this or any other Malt Liquor too strong; for thus the Benefits of the Liquor are lessen'd, and the Inconveniences of it multiplied and increased.

Pale Ale is brewed from pale Malt, which is slenderly dried. It retains much more of the Grain in it, than that which was scorched or half burned. Therefore the Liquor made from pale Malt is most nourishing; and should for that Reason either be brewed smaller, or used more sparingly, because of the Viscidities which must abound in this Liquor, if it be strong.

Amber-coloured Ale is a Mixture both of the brown and pale; and therefore must partake of both their Virtues and Vices, in a lower Degree.

We may also observe the Difference of Malt Liquors in respect of their *Age*. The eldest,

eldest, and well kept, being less viscid ; Age, by degrees, destroying the Tenaciousness of their Parts, making them smaller and of readier Digestion, and quicker Secretion. But they will still come to perfection, and then decay, in proportion to their Strength. For any Malt Liquor, kept till its Particles be broken into as small Parts as they are capable of, is then constantly at its best ; but after that it gradually again goes to Decay, until its whole Spirits be again exhaled, and nothing remains but a vapid sower Mass. But more on this Head in another Chapter.

They differ also in their *Preparation*. That which is blink'd, is apt to cause Cholick, Pains and Gripes, in those that have not been used to it.

They differ from their Manner of *keeping* ; some being bottled, others barrell'd. If Malt Liquors be bottled before the Fermentation is over, they cause Wind and Vapours, Convulsions of Stomach and Intestines, Vomitings, Surfeits, Looseness and Cholicks.

C H A P. VII.

To what Constitutions, and in what Cases, particular Malt Liquors are agreeable, or disagreeable ; with the Reasons thereof.

I. **T**HIS Diversity of Malt Liquors, tho' it may be an Argument of their general Use and Service, yet it suggests to us a Necessity of considering how to make a proper Choice. For, we see Malt Liquors are not only different, but the Difference between some and others of them is as great, as between the most opposite Liquors : I mean, in respect of their Effects and Operations. As some are palatable, and others unpalatable to a very high Degree ; so while some are wholesome and good in most Cases, others may be look'd upon as half Poison. There is a great deal used in this Nation of such a Nature, that any body would wonder how it is either drunk or digested. All that can be said, is, that continual Action and strong Labour may account almost for any thing. This it is that gives Men an Appetite for such miserable Stuff, and at the same time enables them to drink it with Impunity. However, it concerns those who are less exercised, not to drink these Liquors promiscuously and indifferently ;
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but to be somewhat curious in their Choice, and to consult their Constitutions as well as their Palates. Among Wine-drinkers, Men may, and often do suffer greatly by an ill Choice : But if the Ale-drinkers heedlessly swallow whatever may happen to be set before them, they have Reason to apprehend worse Consequences, and must expect to be greater Sufferers. On this Account, I hope, they will not reject the Endeavours of one, who offers to assist them in distinguishing; and that at least they will excuse the Hand that points out which Sorts are innocent and wholesome, and which are contrary. But to proceed.

2. Seeing *Beans, Pease*, and other leguminous Grains, are of more tenacious Parts, and abound more with an essential Oil, and much vegetable Salt, they must afford more and stronger Ale and Beer; and such as will keep longer than either Barley or Oats, and be of far greater Service to hard Labourers, and such as use much Exercise, and are of a strong Constitution. They will afford more Spirit, Strength and Nourishment, and might supply a great Part of our own Demands at Home, and be better for the hard-working Vulgar. In the mean Time, the Product of our Barley might be made into double Ale, or Beer, which is a rich, friendly, balsamick Liquor, will keep several Years; may be transported into both *Indies*, retaining still its full Strength

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and Goodness : Nay, rather become much richer and finer by the Sea, and exceed most Wines ; and would be of as great Esteem and Request with Foreigners, as their Wine is with us ; besides the great Advantage and Addition that would hence arise to the Crown Revenues.

3. Seeing all such Grains as are reducible to a fine Meal, or Flower, are capable of a double Fermentation, and may be brewed or made into Ale or Beer ; then all Shell-fruits such as *Hazlenuts*, *Chestnuts*, *Filberts*, and *Walnuts*, might be made into Malt, and brewed ; which would afford a Liquor far exceeding these made from Barley, Wheat, or Oats. For these Fruits abounding more than Grain, with a fine, ready, separable Oil, they would yield a most rich, soft, smooth, balsamick Liquor ; both Food and Medicine for slender, lean, hectically dispos'd Persons ; and the Use of them would be for the improving of Grounds, the employing of the Poor, and the Provision of dry Constitutions with a Liquor suitable to their Condition.

4. Hence we know the Reason why Ale, or unhopped Malt Liquors, are so very prejudicial to a slow Circulation ; where the Body is cold, weak, tumid, soft, and sluggish ; the Mind weak and fearful ; the Pulse small and slow ; the Colour pale or white ; the Veins small and scarce apparent ; all from a Watry-
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ness and Phlegmatickness of the Humours, and a Laxity and Flaccidity of the Fluids: Where the great Vessels are small and weak, their lateral Vessels large and lax; the projectile Force of the Heart small, the Pulse in the Capillaries of the Brain languid; therefore the arterial Pulsations drive forward the Liquor in the Nerves faintly; the Heart is but poorly supplied with Spirits; its Fibres and Muscles are loose, and act but slowly and weakly: A serous Bile, and small in Quantity, is secreted in the Liver, from want of a brisk Motion of the Blood in the *Vena porta*. In such Persons, the much and frequent Use of Ale softens, relaxes, and weakens the solid Parts more, obstructs the Mouths of the smallest Vessels, fouls the Glands, furs up the Insides of the Capillaries and Lymphaticks with Slime and Viscidity, renders the inactive Body indisposed and corpulent, prepares it for Cachexies, Lencophlegmacies, Dropsies, Coughs, Asthmias, and loads the Urinary Passages with Mucus and Slime. The Reason is, because this unhopped and half-fermented Liquor has neither its Oil, Salt, nor Earth sufficiently broken, subtilized, and reduced to a Spirit; and when taken into the Body, its spirituous Parts quickly pass the Secretions, and exhale; its unbroken Oil being in gross Particles, attract one another, soften and relax the Parts, fill the *Sacculi pinguisferi* with Fat, and render the Body corpulent. The Salts of the Liquor are not extricated from the mucous Earth;

therefore it gives little Stimulancy to the Fibres. The earthy Parts attract one another, and form a kind of slimy Cement; which being neither fine enough to pass off by Perspiration, nor good enough to become a Part of our Nourishment, and constitute some Part of our Solids; therefore it gets into the small Vessels, where Circulation is slowest, the Strength least, and the Attraction greatest. And these viscid Parts being the lightest of our Fluids, they are still next the Sides of the Vessels in Circulation, where they leave a glewy kind of Cement, which sticks to the Vessels, (especially of the complicated Arteries) and fouls the Glands, causes Poorness of Blood, and great Tenacity; which loads the Vessels, produces Stagnations, Ruptures, or Tumours there. Hence Dropsies, and scrophulous Tumours.

5. From hence we learn, that well hopped, thoroughly fermented, clear, ripe, brown, well-kept Malt Liquors, not too strong, nor too weak, must make a very wholesome and agreeable Drink to such Constitutions, when it is moderately used. For its Oils are broken to a Spirit; its Salts are stripped from their Slime, which sheath'd them up; its earthy Parts are mostly settled to the Bottom; the Liquor has re-absorbed all its Spirits from its Fæces; it is become of the Nature of thin, tartarous Wines, and has an agreeable Pungency, dilutes the Viscidity of the Blood, invigorates

vigorates the Solids, makes them play with greater Vigor and Force, dries the Fibres, makes them shake off redundant Serum, promotes Digestion, Attenuation, Perspiration, and other Secretions. The Solidity of the naked Salts gives a Stimulus to the Vessels, and adds a *Momentum* to the Blood, whose Circulation is raised by a moderate Use of this Liquor. And all these Virtues may be more exalted, by impregnating the Liquor with some specifick Vegetables for that Purpose added to the Hops, as Tops of Broom, lesser Centry, Trefoil, Dandelion and Carduus. Any one of these will be of Service, and help to promote these great and valuable Intentions.

6. We discover how Hops are singularly useful in clearing and keeping of Ale. For they subtilizing, and making it more spirituous, active, and rigid, by separating its cohesive and viscid Parts; they are reduced to a kind of penetrating, volatile Spirit, which exists in smaller Particles, more universally in the Liquor; whereby Attractions are prevented, and their Disposition to render the Beer vapid, acid, or sowre is hinder'd.

7. Hence we may learn the Reason why soft Ale, with little or no Hops, if not brewed too strong, nor drunk too freely, is so advantageous to such Persons as have a lean strong Body, a large quick Pulse, contracted Vessels,

Vessels, brisk Circulation; thick, sharp, and acrid Humours, reddish Complexions; whites of their Eyes, lacrimal Caruncles, Lips and Mouth all Reddish. For the Fibres and Muscles of their Heart are very strong, their Solids firm and vigorous, their Bodies are therefore dry; and their Brain separates from their Blood sufficient Spirits. Hence are they prone to Motion, Action, and Passion. Now this Liquor having its Oil existing in larger Particles and Surfaces, its Attraction will be greater. Hence will it soften, smooth, and relax the Vessels more; diminish their too great Strength; preserve their Tone longer, and their Springs from being too quickly worn out. The Fat-containing Bladders will receive more well-prepared Oil, and have it stored up in them. Hence the Body will look plumper, clearer, and smoother. The Water, wherein swims the Oil of the Grain, will sufficiently dilute the Blood; its Acridness will be corrected from the Softness and Balsamickness of the Liquor; the Salts being wrapt up in the earthy *Mucus*, will give no Pain, Stimulancy or Uneasiness to the Membranes of the Vessels.

8. Hence also appears what kind of Malt Liquors will agree with such as have small, strong, and closely compacted Vessels, and thick, tough, and well-mixed Humours, which are not easily altered or changed; whose Bodies are lean and dry, their Colour every where

where Blackish ; who are active and diligent, are of a revengeful Temper, and have a penetrating Genius. Such being of a cold and dry Constitution, are called Melancholy. The Vessels of their abdominal Viscera, especially of the Liver, Spleen, Mysentery, and Pancreas, are mostly loaded with a thick, stiff, blackish Blood, which requires such Things as attenuate, stimulate, and open, are moistning, cooling, softning and dissolve without Sharpness. Now it is manifest, that strong and much hopped Ale and Beer, heat and dry, and therefore must be very improper. For though they may elevate the Spirits for a Time, and disperse this melancholy Cloud a little while : Yet when the accelerated Circulation is over, and the spirituous Parts of the Liquor exhaled from the Body, the viscid being left behind, the Disease must be exasperated from the Increase of the Blood's Thickness and Viscidity, resisting more vigorously the Action of the Vessels, whereby they will be more distended, and the Melancholy increased. But a very suitable and medicinal Malt Liquor may be contrived for this Case, which must be small, clear, ripe, middlingly hopped, and well impregnated with such Things as have a peculiar Activity and Disposition to Motion, and an agreeable Configuration of the Parts ; fit to abrade, and carry along with them such Particles as they lay hold of in their Passage. Or such Things as consist of subtile Parts, ready to mix with, attenuate and wear away those

those mucous and viscid Collections of Humours, which are apt to adhere to, and obstruct the Vessels. And kind Nature has provided us with a great Variety and Plenty: As Wood-Sorrel, Agrimony, Ground-Ivy, Celandine, Doderwood, Groundpine, Horehound, Firtree, Wormwood, Smallage, Spleenwort, Germander, Scurvygrafs, Fumitory, Broom, Liverwort, Water-creffes, Butchers-broom, Vervain, *Paul's-betony*, Ash-leaves, Juniper Berries.

9. This also teaches us how to adapt a Malt Liquor to sanguine Constitutions, which abound with Blood, have soft Flesh, many large blue Veins, have a red Complexion, are chearful, but prone to Anger. All hot and pungent Things are very prejudicial to such. But such as are temperate, and promote Secretion and Evacuations, are highly advantageous. Their Blood is in a middle Disposition, between hot and moist; that is, in the most desirable Temper, and most agreeable to Health and long Life. For as their Solids are not too powerful, so the Patency of all their Vessels keeps them from speedily shutting up, and degenerating into Solids. Therefore since all strong Ale much hopped, must increase the Bodies Heat, and give a Stimulus to the Vessels, its Use must be hurtful: And as the Solids are inconsiderable, in respect of the Fluids, this Increase in the last, both in Quantity and Viscidity, must put a Stress and

and Difficulty upon the Vessels, and at length expose the Body to the Mercy of Heats, Inflammations, and inflammatory Fevers; such as Pleurifies, Squinzies, Peripneumonies, &c. The Pungency also of the Liquor, from its Abundance of naked saline Parts, will stimulate the small Vessels, when the more spirituous and fluid Parts are exhaled. Now all Stimulation promotes Contraction; so that the viscid Parts being got into the small Vessels together with the Fluids, and the last sooner and more easily strain'd off than the first, they will stay behind, and in Time obstruct the Capillaries, and produce long and dangerous Fevers. This Temperament then should be supplied with such Malt Liquors as are small, attenuating, and gently warming, and rather of the *Pale* than the *Brown* Kind, seeing the last abounds with a greater Multitude of naked vegetable Salts, and igneous Particles. Such People should be also careful not to overdose themselves, since their Fluids have so much the Ascendant over their Solids; for thereby they will be in danger of destroying the Balance of Nature, the Consequence of which will soon be fatal.

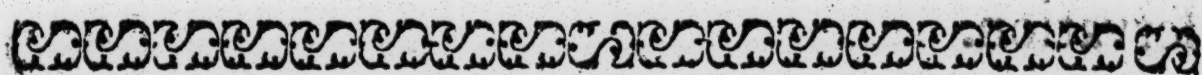
10. Hence learn we the Reason why barrelled Ale is preferable to bottled, for such People as have slow Digestion, and weak Bowels, and are thence liable to Indigestions, Belchings, Convulsions, Vomitings, and Surfeits. For the Liquor being drunk, the Spi-

rit and Air wrapt up in its viscid Parts, will dilate and expand themselves, and also rarify Viscidities in the Stomach. Hence Belchings ensue, while the Liquor is in the Stomach; and when got down into the Belly, where it has a longer Course before it can be got off; and the Bowels being weak in the Peristaltick Motion, and the Humours viscid and inactive, the Guts are distended, stretched and pained; and if not eased by proper Discharges, Cholicks and Spasms are produced. For all Liquor bottled up, either during its Fermentation, or before it is Ripe, when drunk, begins to ferment anew in the Bowels, from the Heat and Action of the Parts: And except the Vessels have so much Strength as to resist this Rarefaction, it is easy to account for its producing all these Symptoms which happen in the Body.

II. This teaches us how great the Mistake of such is, who drink fermenting or bottled Ale for a Carminative. For it produces these Explosions only by the Rarefaction of its Contents, and gentle Attenuation of some of its grosser Parts; but strengthens not the Bowels, nor deterges them from those Viscidities, and that *Mucus* which lies between them and the Food digested. But the gross and unattenuated Parts of the Liquor join with the former Slime, and add to its Bulk and Mischief, and in short Time will produce these Symptoms
in

in a worse Degree, mentioned in the last Observation.

By attending to such Particulars as are here laid down, we may without much Difficulty satisfy our selves concerning the Choice and Preference of Malt Liquors, and a suitable Application of them to our selves. For Wheat affording the most Nourishment of any Grain we have, must yield a more nutritious Liquor than either Barley or Oats; as is evident from the Bodies of such as eat only Wheat-bread, which are commonly plumper than those who feed on Barley or Oat-bread: And Drink made of Wheat or pale Malt, causes Nurses to give much more Milk than brown Ale. For all pale Malt Liquors (other Things being alike) nourish much more than the brown; therefore must Ale from Wheat, and all pale Malt, cause greater Obstructions in the Viscera, and Vessels; Straitness of the Breasts, Coughs, Jaundice, and Difficulty of Breathing; and are best adapted to thin, lean, dry, hectic Bodies, whose Perspiration is too large, their Vessels too strong, their Solids over-proportioned to their Fluids. But Ale from brown Malt is more detergent and drying, and therefore well fitted for corpulent Bodies, lax Solids, and weak Vessels. For which Purpose a fermented Liquor might be extracted from Heath-Pease, better, drier, and more restraining, than any of those before-mentioned.



C H A P. VIII.

Malt Liquors compared to Wine, in respect of English Constitutions.

Hitherto I have considered Malt Liquors first in General, then in Particular. Now I consider them Relatively, or in Comparison of Wine: The Competition lies chiefly between these Two; the better and richer Sort of People being fond of the latter, and the middling and laborious Part pleading strenuously for the former. Concerning this Matter, the following Remarks may possibly deserve to be considered.

I. The Countries which produce Wines, are of a hotter Climate, which more rarefies the Fluids of their Inhabitants, and relaxes their Solids; and therefore their Bodies require, and stand in Need of a thinner, more separable, and easier digested Liquor, than those produced from Malt, which mostly are used before they be full Ripe; are of more viscid, tenacious, adhesive, and attractive Parts. Therefore as they seem so agreeable to such Mens Constitutions, Nature has provided them with Wines; the weaker and lower Sorts whereof are chiefly used by the Vulgar;

Vulgar: But the People of Fortune and Figure, drink the strong-bodied Wines, which is the Occasion of their great Liableness to the Gout, Stone, Rheumatism, and inflamatory Fevers. But *Englishmen* enjoying a cooler, and more temperate Climate, their Constitutions are more Robust, and they can digest a stronger-bodied Liquor than Wine.

2. Those Countries which have Plenty of Wine, are chiefly obliged to vegetable Food for their Sustenance: Which Sort of Aliment is not only poorer, but generally of more tenacious Parts; as leguminous Fruits, cooling Roots and Herbs, &c. Therefore it requires a Liquor of more easily separable Parts, and that has in it a Mixture of Tartar, which may help to break the Cohesions of these tenacious Viands, by the Solidity of its Parts, and add a *Momentum* to the Blood; and by its agreeable Austerity, give a gentle Stimulancy to the Solids, that they may put forth a greater Force, and act more vigorously in resisting the viscid Fluids, break them down, and separate their Parts, so as they may be fitted for Secretion and Evacuation. But as their Meat is viscid, and their Drink otherwise, so the Reverse of this is our Case. For our Drink is viscid, and our Food is not so. So that thus far we are pretty much upon a Level. But as both our Meat and Drink are more nourishing than theirs, it must be granted we are more obnoxious to Plethora's, and the Diseases

eases consequent thereupon. It concerns us therefore to assist Nature by diligent Exercise, and to use Moderation both in our Eatables and Drinkables. If we transgress both these Rules, we shall certainly suffer, and in a short Time.

3. Those Countries where Wines abound, are hotter and drier, have less Herbage, and fewer Cattle; for the same Reason have they less Corn, and therefore must depend upon Wine for a Supply of Spirits: Which as it is better adapted to their Constitution and Food, so kind Nature hath stor'd them with it in great Plenty. But our Climate denies us the Production of Wine, and richly supplies us with Corn, for both Meat and Drink. But to proceed,

4. It seems to me an Argument founded in Nature, that Meat and Drink produced by the same Earth where we live, and were born; growing up in the same Air we breathe, warmed by the same Degree of Heat we enjoy, and fed by the same Fluids which nourish our own Bodies; and all which Custom has rendered familiar to our Ancestors and us: I say, it seems to me highly reasonable, that such Meat and Drink should be more agreeable to our Bodies, than any imported Foreign Drink, produced in a more sulphurous Earth, and a more rarefied Air and Water. Though I deny not the Friendliness of thin and tartarous Wines to

to the Studious and Valetudinary. But how small a Quantity of these Wines have we, in Proportion to the great Demands for Wine amongst us ?

5. As the *British* Climate produces a more robust and hardy People than hot Countries generally do, so are they more industrious and laborious, and therefore can bear a stronger and more nutritious Diet, which does not so quickly evaporate, but is of longer Duration and Nutrition in hard-wrought Bodies, that can only be supported by a strong Diet. And therefore if the late Water-writers advise the Use of simple Element, with the Indulgence of a little Wine, to the inactive, studious, and valetudinary, so far they are certainly right. But if they recommend and press Water only upon the active, healthy, strong and laborious, exclusively of the Use of Malt Liquors, they are certainly in an Error. For though it be undeniable that the ancient Water-drinkers were healthier and longer-liv'd than their Posterity, that give themselves up to Wine and Malt Liquors only; yet it may justly be supposed, they were less laborious than our Manufacturers and Tradesmen, who continually get their Bread with the Sweat of their Brows. But perhaps the Design of some of these Writers might not be to bring Men to a total Disuse of Vinous and Malt Liquors; but by setting before them the Dangers and Accidents which follow excessive Drinking, and the Injury

jury of them to some Constitutions, they might at last bring Men to a sober and moderate Use of them; and then they would be not only safe, but highly beneficial to them; when suited to sundry Temperaments, Ways and Busineses of Life.

6. Another Reason that may incline *Englishmen* to prefer Malt Liquors to Wine is, that in Relation to the former, they have the Fidelity of their Friends and Servants to depend upon, that what they Drink is what they would have, and expect to receive, without any Fallacy or Cheat. But so general is the Adulteration of Wine become, that it is grown into a Trade, and a Mystery, having a great Variety of Crafts and Secrets. So that it is impossible for the Drinker to know what he swallows, when he drinks common Wine. How nauseous, how improper, how unwholesome must many of their Compositions be? It is a certain Truth, that Wine-brewers should understand the animal Oeconomy, Chymistry, and natural Philosophy very well, that they may know the Analysis of the Ingredients they add to their Wines, and how these agree, or disagree, with the Juices of a human Body; what Alterations and Effects they have on each Part of the Blood, and how they affect the Secretions and Excoctions. For what Nature sends crude, and leaves to the Art of Man to perfect, we know to be good in its Kind; but when sundry kinds of the Species are mixed together,

gether, and blended with Earths, Fossils, Sulphurs, and some animal Productions; if this require not as much Judgment to adapt it safely, and wholesomely, to the Use and Nourishment of Men, as the fitting the fundry Judgments of a compound Medicine, by a Physician, to the Constitution of his Patient, I am much mistaken. And what thinking Man will say, that this Medicine, tho' prescribed with the best Judgment, made up with the greatest Integrity, and its Administration attended with the best Success, shall therefore become a *Panacea*, or universal Remedy?

7. But we can further plead the Preference of Malt Liquors to Wine, in respect of the Generality of this Nation; that Custom has not only made them familiar to them, but the Liquor separated from them, became a constituent Part of their own Bodies, even while in *Embrio*, and Infancy: Their Parents having been in Part nourished by them, they come to have a Part of them in the Composition of their first Principles of Life, and therefore have generally Reason to look upon them as more natural.

To these Reasons I might add, 1. The Unattainableness of the *French* Wines by ordinary Tradesmen, because of their extravagant Price. And for the *Portugal* and *Spanish* Wines, which are mostly used; such as have indulged the Use of them, would do well to use them

as a Cordial, and take them seldomer, and in small Quantities. For though they be much stronger, yet do they oppress the Stomach, and disorder the Head more than the other. For they are but half fermented; their oily Parts are gross, and not half broken; and this is the Reason of their luscious, sweet Taste in Drinking, and of their affording much less Spirit in Distillation. For a through Fermentation volatilizes the Oil, and essential Salt, and reduces them into so minute Parts, as to rise in the Form of a Spirit; for Spirit is only Oil and Salt subtilized. And for this Reason must our own Ale and Beer, if Good, be absolutely preferable to thick luscious Wines, seeing they are only half fermented, and ours well fermented. 2. A most wholesome and agreeable Drink may be provided from Malt in all Places, at all Seasons; whereas Wines can only be made at one time of the Year, and in a hot Climate. 3. Though Wine cheer and revive sooner, yet Malt Liquors, especially those from Wheat, more and longer. For Drinkers of Malt Liquors eat less, and yet are fatter and stronger than Wine-drinkers. 4. As *Hippocrates* justly observes, Nature, as in all other Things, delights most in those Foods we are most accustomed to; and no doubt this Liquor is most grateful, and best accommodated to our Natures, seeing we daily use the Corn of which it is prepared, and other Things made of the same Matter, for our Bread and Food, and because of the Parability of many useful
and

and excellent Things from Ale, at small Cost,
both for Food and Medicine.

The CONCLUSION.

THE Result of the whole Matter is, That Men would first distinguish, and then drink. Distinguish, I mean, whether their Constitutions, Circumstances, and ways of Life, be such as require the Use of Wine, or Malt Liquors; and if, by the foregoing Rules, they find the latter proper and safe, then distinguish what Sort of Malt Liquors may be most suitable to their Case. If they take this Method, nothing but Excess can hurt them. They need not regard those general and groundless Invectives, which have been thrown about of late. If every Thing was to be decried, that had been at any Time hurtful to Mankind, what could possibly escape? Should any Writer take upon him to inveigh against Water, because it once drowned the World, and has ever since, upon certain Occasions, done a great deal of Mischief; should another disparage fresh Air, as occasioning Colds and Catarrhs in the tender and valetudinary; should a third exclaim against Sun-shine, upon Account of the Damage it does to sore Eyes, What should we think of these Mens Understandings? If they meant any Thing more than Raillery,
should

should we not pronounce them inexcusably absurd ; and conclude, that they ought not to be trusted with Pen and Ink? No kind of Food or Medicine can be thought of, that has not been render'd highly detrimental by Mismanagement and Misapplication. An unseasonable or immoderate Use, may turn the most innocent Things into the most pernicious, and convert the greatest Blessings into Means of Destruction. Must we therefore spend our Time in inventing Arguments to dissuade the sound Man from the Support of his Life, or deprive the Sick of the Hopes of his Recovery? As reasonable is it to prejudice and prepossess Men against a Liquor that is always highly advantageous to the strong and active, and in some Cases beneficial to the Weak and Sickly.

In fine, if any one impute what I have said in Behalf of Malt Liquors, to Partiality, and Prejudice for my own Country; I should not think I had any mighty Reason to be ashamed of the Imputation. But in Truth, I have considered and enquired into this Matter, with all the Indifference of a Foreigner, as believing my self obliged to be more solicitous to promote the Health and long Life of my Countrymen, than the Honour of our Climate, or the Credit of *British* Liquor. But tho' that was, and ought to be uppermost in my Intentions, yet it would be an additional Pleasure to me, if, while I was aiming at the former, I should have contributed any Thing to the latter.

F I N I S



K. DIRECTIONS
966. 23

A
G U I D E
TO
Gentlemen and Farmers,
FOR
BREWING
THE FINEST
MALT-LIQUORS,

Much *Better* and *Cheaper* than hitherto known.

S H E W I N G

What Care is to be taken in the Choice of
Water, Malt, and Hops: And in what Proportions
they are to be Mixed, Boyled and Fermented, for
Making the best *March*, or *October Beer*, *Strong Ale*, &c.

A L S O

Particular Directions for the right Managing all
Brewing Utencles.

In a Method never before Publish'd.

Useful for all such as are Curious in *Malt-LIQUORS*.

By a Country Gentleman.

W I T H
A *SATIR* upon *BRANDY*, By another Hand.

Sold by *B. Bragg*, at the *Blew-Ball* in *Avemary-Lane*,
next *Ludgate-street*, 1703.



(81)

DIRECTIONS

FOR

Brewing.

THEY who are Curious in *Malt Drinks*, as it is fit every one shou'd be that uses 'em, (unless their Circumstances be such that they must be contented with what they find) generally make out all their first *Wort* alone into *Ale* or *strong Beer*. *Ale* is the only word used in the *North of England* for strong *Malt Drink*: And was likely the only strong *Drink* our fore-fathers made of *Malt*. This was the *English Beverage* Celebrated by our *Poets*, who yet cou'd

not forbear to blame the foul Thickness of it.
One says,

*Men drink it Thick, and piss it Thin,
Mickle Faith by St. Eloy, what leaves it within?*

Which seems thus Translated by another, unless good Wits jump.

————— *Nil spissius illa,
Dum bibitur, nil clarius est dum mingitur ; ergo
Constat quod multas faeces in ventre relinquit.*

Indeed before the use of *Hops*, which began in *England* about the Year 1540, as I take it, it was hard to Brew Drink, which wou'd be Fine before it was Eager. All good *Ale* is now made with some small mixture of *Hops*, tho' not in so great Quantity as Strong *Beer*; design'd for longer keeping: And is for that purpose usually Brewed in *March* or *October*.

He that will Brew well, must be careful in the Choice of his *Water*, *Malt*, and *Hops*, and in the manner of mixing and fermenting them.

1. As to *Water*, *Pond-Water* and other *Standing Waters* in fat Grounds, if clear and sweet, make a Stronger Drink with less *Malt*, then *Well*, *Pump* or *Conduit Waters*: Tho' any of these that are not hungry, and will bear *Sope*, and lather without breaking, are good. *Rain-Water*, which Lathers the best of any, if saved from *Lead*, or where it brings no *Salt* from the *Mortar* over which it may pass, is good to Brew *Ale* to be drank new, but is not proper for Drinks to be long kept: It being very apt to change, and unless kept cool and in great Quantities, as in the Leaden Cesterns in Cellars at *Amsterdam*, will corrupt and putrify the soonest of any *Water*. *Thames-Water* taken up about *Greenwich* at Low Water, where it is free from all Brackishness of the *Sea*, and has in it all the Fat and Sullage from this great City of *London*, makes very Strong Drink. It will of it self alone, being carryed to *Sea*, ferment wonderfully, and after its due Pur-gations, and three times stinking (after which it continues sweet) it will be so strong, that Several Sea Commanders have told me it wou'd burn, and has often fuddled their Marriners. Other Commanders have

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denyed this, which I thought I had Reason to impute to their want of Observation. However I conceive *Thames-Water* is by no means fit to Brew Strong *Beer* to keep, for that, let the Drink which is Brewed of it be never so clear, it is apt on any considerable and sudden change of Weather, to ferment and grow foul. And I take this for a Rule, That no *Malt Drink* is truly good, which is not perfectly fine. Upon the whole, the best Liquor to Brew with, is that which is taken from a small clear Rivulet or Brook, undisturb'd by Navigation or Fording: And taken up in dry Weather, when no Rain has lately washed the Banks. My first two Brewings were made of such Water; which with all my Care and Experience I cou'd never equal since: Though I have been very curious and sent some Miles for my Water. Possibly much the best Water in *England* is that at *Castleton* in *Derbyshire*, commonly called, *The Devils Arfs*, &c. Which Owzes from a great Rock, covered over with a shallow Earth and short Grass a top. It is incredible that so much Water shou'd percolate through so vast a Quantity of one Rocky Stone, were it not obvious to any one who goes into Pools Hole, where he will

will find the Water continually dripping through the Top, and running down the Sides, till it makes a kind of Chrystal Rivulet at the Bottom of that Prodigious Rocky Concave. I have seen the *Ale* made of *Castleton-Water* as clear in three days after it was Barrell'd, as the Spring-Water it self, and impossible to be known by the Eye in a Glasse from the finest *Canary Wine*. *Brewers* shou'd be as curious in the Choice of *Water* for their first *Wort*, as *Cooks* are for their Boiling of *Yellow Pease*. For as some *Waters* will never Boile them soft, so will they never make good *Ale* or Strong *Beer*. However if the best *Water* be not to be had, but at too great a distance and charge, you may for your Second and Third *Worts* which are quickly spent, and used only for Table Drink, make use of such *Water* as you have near at hand.

2. As for your *Malt*. The North Country *Malts* from *Nottinghamshire*, *Derbyshire*, *Leicestershire*, *Cheshire*, *Lancashire*, &c. are the best, especially for *Ale*, but are generally too slack dryed for *March* or *October Beer*, which is to be kept at least half a Year before it be Drank. The Goodness of these *Northern Malts* proceeds partly from the
Corn

Corn which grows on Grounds more rested than in the *Southern Countrys*, where the Rents are more racked, and the Grounds more worn by continual Sowing; and partly from the *making*, in which they take more time then in other parts, and dry it leisurely with *Pit Coal Charkt*, called in some Places *Coak*, and in others *Culm*, which is sweet and gives a gentle and certain heat. Whereas in the *South East* parts, they dry their *Malt* with Straw, which is hard to keep to a moderate and equal heat. And in the *West Countrys* with *Wood*, which gives a most ingrateful Tack to such as are not by Custom familiarized to it. Besides, in the *North*, they do not run out their *Barley* in *Malting* to such Lengths as in other parts: And in Grinding they set their Upper *Millstone* so high, that it breaks off only the Tops of the *Cleavel*, which makes their Drink so fine. And *Malt* small ground will never make fine Drink.

There is possibly some Reason for the Observation, that *Malt* mixt of several kinds makes the best Drink: And that it ought to ly ground in the Sacks three or four days before it is used.

••• Your

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 13. Your *Hops* must be bright, well scented, well dried, cured and bagg'd; and generally speaking are best about a Year old. They are a very uncertain Crop, and consequently of a very uncertain Price, sometimes sold at about Six Pence, sometimes at about half a Crown *per Pound*. And I believe it may be truly said, That better *Hops* have been sold for Six Pence or under, then ever were sold for Two Shillings *per Pound*, or upwards. Indeed all Fruits are best when they are cheapest. Those Years that are kindest for the Quality allways producing the greatest Quantity. So that it is certainly a wise way, on all accounts, to furnish one self well with *Hops* well cured in a cheap Year.

14. In your mixing and fermenting all these three together, That is in *Brewing*, after you have made a discrete Choice of our *Materials*; You must first consider what sort of Drink you design to Brew, and accordingly proportion your Quantities. If you design your first *Wort* for strong *Ale* or *March* or *October Beer*; you must proportion five Gallons of Drink to every

B

Bushell

Bushell of *Malt* (that is to say avoiding
 Fractions) Eleven Bushells of *Malt* to an
Hogshead of *Ale* or *Beer*. But it must be
 remembred, that in so great a disproportion
 of *Malt* to Drink, as Eight to Five, almost
 a Third of your Liquor in the first *Wort*
 will be absorped by the *Malt*, never to be
 return'd, and an allowance is to be made
 of about a Sixth Part to evaporat in Boyl-
 ing. So that if you expect to clear a
Hogshead of Drink, that is fifty four Gallons,
 from your first *Wort*, you must put into
 your Mesch-Tub near Ninety Gallons of
 Liquor. But for your Second or Third
Worts, the Goods being wet before, you
 need put up no more Liquor then you in-
 tend to make Drink, except an allowance
 of about a Tenth part for wast, that not
 Boyling so long as your first *Wort*. And
 you may of your Second *Wort* make one
Hogshead of good middle *Beer* or *Ale*, as
 Strong as the common *Ale-house* Drink in
London. And your Third *Wort* will make
 one *Hogshead* of good Small *Beer*.

• I propose in this Case the drawing of
 Three *Worts* because of the great Quantity
 of *Malt* to a smaller of Liquor. Other-
 wise

wise in Ordinary Brewings, where you design not very strong Drink, six or seven Bushells of *Malt* will make one Hogshead of good strong, and another of small Beer. And in such case, two *Moaks* will as well take out the strength of your *Malt*, as three in the other.

It is certain that in either of these cases your *Malt* will not be run out as the Common Brewers uses to be, so that if you take up an handful of the Graines you may blow them out of your hands with your Breath.

But it is hardly worth any Man's while, who is not indigent, to run it out farther for his own Family; for all the Drink you can after make of it, will be but like the washing of Graines, it will prove poor Stuff. and if not drank presently, it will be apt to stink, unless you mix it with some of the former *Worts* which it will but spoil. Besides, what you leave in your Graines, by the way proposed, is not lost. For if you live in the Countrey, they will nourish your Cattle and Swine, and if in a Town, the Poor will be gratified by letting them put

up some cold Water to run through them, which they will carry away cold in Pails, and boyl at home without any trouble or charge to you ; so that in effect you really relieve the Poor only with a little of your Cold Water which they themselves draw.

The Proportion of *Hops* may be half a Pound to an Hogshead of strong *Ale* ; one Pound to an Hogshead of ordinary strong *Beer* to be soon Drank out : And two Pounds to an Hogshead of *March* or *October Beer* : And for the after *Worts* , which are not to be kept long, what comes from the first *Wort* will serve well enough to Boyl again with them.

If you put into your first *Wort* a greater Proportion of *Hops*, and Boyl them all the while your *Wort* Boyls, you will make it too bitter : But I conceive it adviseable to double the Proportion, by taking out the first parcell when your *Wort* has Boyled half the time you design it, and then adding the same Quantity of fresh *Hops* to continue Boyling till you take your *Wort* out of the Copper. This will somewhat encrease your Charge, but that will be very inconsidera-

(11)
inconsiderable, if you furnish your self in a cheap year of *Hops*.

By this way you will take out only the fine quick Spirits of the *Hops*, (which I take to be an useful and wholesome Vegetable) and will have a good Quantity left fit for the use of the Poor, if you give them the last running from your *Malt*.

Hitherto of the Qualities and Proportions of your Materials. Now concerning the manner of putting them together.

After you have put your Liquor in your Copper, strew an handful two or three of *Bran* or Meal upon it, not so much to strengthen your Liquor, as to make it heat quickly, for simple Water alone will be long ere it Boil. But you must take your Liquor out of the Copper when it begins to simmer, and not suffer it to Boil: For though it were granted that the Boiling did no harm to your Liquor, by evaporating the Natural Spirit of the Water (which it likely does) yet 'tis a needless expence of Fuel and Time, first to make it too hot, and after to stay till 'tis cooler again. For
you

(12)
you must by no means mix your Malt with
Boyling hot Liquor, which will make the
Malt clot and cake together, and the most
flowery parts of it run whitish, glewy and
fizy, like Saddlers Paste, so that it will
never mix kindly, and give out its Strength
equally to the Liquor.

I had not dwelt so long on this Head,
but that I know many put their Malt first
in the Mesch-Fat, and then pour in their
Liquor for the first Wort, which is indeed
necessary in the Second and Third Worts.

The contrary Practice of putting in your
Liquor first, has these Advantages.

First, You can never otherwise guess when
your Liquor is just cool enough to be
mingled with your Malt: But in this case,
you have a certain *Criterion* and Rule to
judge by, that is, you must let your Liquor
remain in your Mesch-Fat till the Vapour
from it be so far spent, that you can see your
Face in the Liquor: And then pouring
your Malt upon it, you have this farther Ad-
vantage, that you keep your Liquor longer
hot, and it sinks gradually, distributing it's
strength

strength to your Liquor equally, without matting, and if it does not descend fast enough of it self, you must press it down with your Hands or Rudder, with which you use to stir your Moaks. This must be done by degrees: Always remembering, that you shake your Sacks before you remove them over the sides of your Mesch-Fat, to get out the Flower of your Malt which sticks to them. And after all your Malt is settled, and your Liquor appears above it, you must put up in your Mesch-Fat as much more hot Water out of your Copper, as will make in all Ninety Gallons, for one Hoghead. Then stir it almost without ceasing, till it has been in the Mesch-Fat about two hours from the first putting up your Malt, in which your Servants may help and relieve one another.

After this pull out your Rudder, and putting a little dry Malt a top, cover it close, and let it stand half an hour undisturbed, that it may run off clear, and the Malt being sunk to the bottom, the Liquor a top will run through it all again, and bring away the strength of it. After this, you must lift up your Tap-staffe, and let
out

out about a Gallon, not into your Tub underneath or Under-back, which is to receive your Wort, but into your long-handle Jet, and put it up back again, stopping your Tap hole: This do two or three times, till you find it runs clear, which it will not do at first, though your Tap-hose be never so well adjusted.

Throughout the whole Course of your Brewing, you must be very careful to do all you can to promote the Fineness and Clearness of your Drink.

In the North of *England*, where much the best Malt-Drink is made, they are so careful of making their Drink Fine, that they let their first Wort stand in their Receivers till it is very clear, all the gross parts being sunk to the Bottom, this they continue to do about Three hours in Summer, and Ten or Twelve hours in Winter, as occasion requires, which they call *Blinking*, after which, leaving the Sediment behind, they only lade out the Clear Wort into the Copper. Which Custom is peculiar to the North and wholly unpractised in other parts.

When

When all is run out into your Receiver or Under-Back, Lade or Pump out your Second Liquor, ordered so as to be just then ready to Boyl, on your Moaks: And putting your first Wort into your Copper again, let it Boyl reasonably fast (which Boiling the *Hops* put on it will much accelerate) for about one hour and an half, for *March* or *October* Beer to be kept long: And one Hour for strong *Ale*, to be Drank new. I know that a longer Boiling is generally advised. But I shall answer that when I come to shew the Reasons why Common *Brewers* seldom or never make good Malt Drinks. I advise the *Wort* rather to be Boyled reasonable fast, for the time, then to stand so long to simmer, because common Experience shews it waists less, and Ferments better, after so long Boiling, than Simmering. And this Observation, grounded on Experience, will not seem strange to *Philosophers*; who know, that Six hours of a kindly insensible Perspiration shall make a Man lighter in the Morning, then so many hours of ordinary Sweating.

C

Possibly

Possibly a less Fermentation and greater Evaporation is best for the Blood, and greater Fermentation and less Evaporation is best to prepare other Liquors for a new Fermentation.

Your first *Wort*, being thus Boyled, must be Pump'd or Laded off into one or more Coolers or Cool-Backs, in which leave the Sullage behind, and let it run off Fine. The more Coolers, and the thinner it stands, and the sooner it Cools (especially in hot Weather) the better : Let it run from your Cool-backs into your Tun very Cool, and set it not there to Work, in Summer, till 'tis as cool as Water. In Winter it must be near Blood Warm, at least the Bowl in which you put your *Yest* to set the rest on Working must have a mixture of *Wort* hot enough to make it all Ferment. When you find it begins to work up thick to a *Yest*, mix it again with your Hand Jett, and when it has workt it self a Second time to a *Yest* : If you design'd it for *Ale* and speedy Drinking, and hopp'd it accordingly, then beat in the *Yest* every five hours, for two days together, in the Summer time,
or

or more, according as the Weather is; and for three or four days in Winter, covering your Fat close that it fall not in your working Tun.

When your *Yest* begins to work sad, and upon turning the Concave of your Bowl downwards sticks fast to the inside, then, skimming off the *Yest* first, cleanse the rest into your Vessel, leaving all your Dregs in the bottom of your Tun, and putting only the clear up: After it has a little Fermented in your Vessel, you will find it in a few days fine, and fit for your Drinking. Though according to the Quantity of your *Hops* you may proportion it for longer keeping.

If you Brew in *March* or *October*, and have hopp'd it for long keeping, you must then upon its Second Working to a *Yest* (after once beating in) cleanse it into your Vessel with the *Yest* in it, filling it still as it works over, and leaving when you stop it up a good thick head of *Yest* to keep it.

In Brewing *March* and *October Beer*, it is advisable to have large Vessels bound with Iron Hoops, containing Two, Three, or Four Hogsheads, according to the Quantity you intend to make, putting all into one Vessel. This sort of Drink keeping, digesting and mellowing, best in the largest Quantities.

Your Vessels must be Iron hoop'd, else your *March Beer* will be in danger to be lost or spoiled: Leaving your Vent Peg allways open Palls it, and if it happen to be fastned but Six Hours together in the Summer, a sudden Thunder or Stormy Night may happen next Morning to present you in your Cellar an empty Vessel and a covered Floor.

It is pretended that *March* is the best Month for Brewing, and the Water then better than in *October*: But I allways found that the *October Beer*, having so many cold Months to digest in, proves the better Drink by much; and requires not such watching and tending as the *March Beer* does, in opening and stopping the Vent hole on every change of Weather.

Many

(19)
Many Countrey Gentlemen talk of, and magnify their stale *Beer* of Five, Ten, or more years old. 'Tis true more *Malt* and *Hops* than I propose will keep Drink longer than I use to do: But to small purpose; for that it will not exceed mine in any thing desirable, except such an extraordinary Strength as few Men care for. I allways broach mine at about Nine Months end, that is my *March Beer* at *Christmas*, and my *October Beer* at *Midsummer*, at which times it is generally at the best. But will keep very well in Bottles a year or two more. Stop your Vessel close with *Cork*, not *Clay*, and have near the Bung-hole a little Vent-hole stop'd with a Spile, which never allow to be pull'd out, till you Bottle or draw off a great Quantity together. By which means it is kept so close stop't, that it floushes violently out of the Cock for about a Quart, and then stops on a sudden, and Perles and Smiles in a Glass like any Bottled *Beer*, though in the Winter time. But if once you pull out the Vent-Peg, to draw a Quantity at once, it will sensibly loose this Briskness; and be sometime before it recovers it.

I propose no Directions for the Second and Third Worts: He that can manage the first well, can never fail in the rest. Your Third *Wort*, being poured on hot Goods, may be only Cold Water.

Now that I have given the best Directions for Brewing that readily occur to my Memory. I come to shew the Reasons why Common *Brewers* very seldom or never make good Drink. This I know is generally attributed to their Underboiling their strong *Worts*, which to prevent, some *Brewers* to their Detriment, and no manner of Advantage to their Drink, have Boyled them three hours, which is thrice as long as needed; and all to no purpose.

In most (if not all) of the Northern Counties there are few or no Common *Brewers*. The Inn-keepers and Publick *Ale Houses* Brewing what they Retail in their own Houses. And Private Families for themselves. And in all these Counties 'tis as rare to find any ill Malt Liquors, as it is to find good in *London*, or the adjacent Counties.

This

This may serve to shew the Mistake of those, who ground their Computation of the Number and Proportion of Inhabitants, between some Southern and Northern Cities and Towns, on the Kings Renew of Excise arising out of them. For that, in the Eastern and Southern Counties, abounding in Common *Brewers*, almost all the Inhabitants of Cities and great Towns there, and the meaner People of their Neighbourhood, take their Drink of the Common *Brewers*, clog'd with Excise; which few or none of all the Inhabitants of the Northern Towns do.

In the *West* of *England*, They have some Common *Brewers*, but not in Proportion to the *East* and *South*. In most parts of the *West*, their Malt is so stench'd with the Smoak of the Wood, with which 'tis dried, that no Stranger can endure it, though the Inhabitants, who are familiarized to it, can swallow it as the *Hollanders* do their thick Black *Beer* Brewed with *Buck Wheat*.

In *Bristol* they have considerable Quantities of *Malt* by *Sea* from *Wales*, some dried with *Straw*, some with *Coak* or *Culm*, much the best way of Drying. Yet have little good Drink made from it, which is generally imputed to the Brackishness of their Water.

In short, the Reason why Publick and Common *Brewers* seldom or never Brew good Drink is, That they Wet more Malt at once, then 'tis possible they can have Vessels and Servants enough to Work, and set it cool enough to Ferment kindly: And withall, Brew so often, that they cannot sufficiently, between one Brewing and another, cleanse and scald their Brewing Vessels and Barrels, giving them due time to dry, but that they will retain such a Rest as will always Char and Sour their Liquors. And the Mischiefs accrewing by such Neglects are incredible to Persons unexperienced.

My

My Brewers have been so cautious in this Particular, that if any Servants of the House, have by accident made use of any long-handled Jett, hand Jett, or Pail, with cold Water during the Brewing; they have scalded it a new, and let it dry before they wou'd use it again.

This Practice of the Common *Brewers* Wetting such vast Quantities of *Malt* at once, and Brewing so often, puts me in Mind of the Story of *Melibeus* the *Mantuan Shepherd* in *Boccalin*, who tells the *Roman Empire*, that whilst he and *Menalcas* kept Five Hundred Sheep each, as they long did, they made a Crown a Head by the Wooll and Lambs, amounting to Five Hundred Crowns *Per Annum*. But when *Menalcas*, from Covetuousness doubled his Flock to a Thousand Sheep, expecting to get thereby a Thousand Crowns a Year, he made but Three Hundred Crowns; and when he trebled his Flock, and made them Fifteen Hundred Sheep, he got nothing.

D

This

This is but a Course *APPLICA-
TION* of a *STORY*, fram'd with a
great Contexture of Witt and Political
Wisdom.

A

SATYR

UPON

Brandy.

Farewel damn'd Stygian Fuyce, that dost bewitch,
From the Court Bawd, down to the Country
Thou Liquid Flame, by whom each firey Face (Bitch;
Lives without Meat, and blushes without Grace,
Sink to thy Native Hell to mend the Fire,
Or if it please thee to ascend yet higher,
To the dull Climate go, from whence you came,
Where Wit and Courage do require your Flame;

Where they Carouse it in Vesuvian Bowls,
 To crust the Quagmire of their spongy Souls:
 Had Dives for thy scorching Liquor cry'd,
 Abraham in Mercy had his suit deny'd;
 Had Bonner known thy force, the Martyrs Blood
 Had hiss'd in thee, and sav'd the Nations Wood:
 Essence of Ember, scum of melting flint,
 With all the Native sparkles floating in't;
 Sure the Black Chymist with his Cloven foot,
 All Aena's simples in one Lymbeck put,
 And double still'd, nay quintessenc'd thy Juyce,
 To charcoal Mortals for his future use.
 Fire-ship of Nature, thou dost doubly wound,
 For they that grapple thee, are burnt and drown'd:
 As when Heaven prest th' Auxiliaries of Hell,
 A flaming storm on cursed Sodom fell,
 And when it's single Plagues would not prevail,
 Egypt was scalt with kindled Rain and Hail.
 So Natures feuds are reconcil'd in thee,
 Thou two great Judgments in Epitome.
 God's past and future Anger breath in you,
 A Deluge and a Conflagration too.
 View yonder Sott, I do not mean Shr---Sh---
 Grilled all o're, by thee, from head to foot,
 His greasie Eye-lids shoar'd above their pitch;
 His Face with Carbuncles, and Rubies rich,
 His Scull instead of Brains supply'd with Cinder,
 His Nose turns all his Handkerchiefs to Tinder;
 He

He breaths like a Smiths Forge, and wets the fire
 Not to allay the flame but raise it higher.
 His Stomach don't concoct, but bake his Food,
 His Liver even vitrefies his Blood;
 His trembling hand scarce beaves his Liquor in,
 His Nerves all crackle under's Parchment Skin;
 His Guts from Natures drudgery are freed,
 And in his Bowels Salamanders breed.
 He's grown too hot to think, too dull to laugh,
 And steps as tho' he walkt with Pindars staff.
 The moveing Glass-house lightens in his Eyes,
 Singes his Cloaths, and all his Marrow fries,
 Glows for a while, and then in Ashes dyes. }
 Thus like a sham Prometheus we find,
 Thou stol'st a Fire from Hell, to kill mankind.
 But stay, least I the Saints dire Anger merit,
 By stinting their Auxilliary Spirit;
 I am inform'd, whate're we wicked think,
 Brandy's reform'd, and turn'd a godly Drink.
 E'er since the Publick Faith for Plate did VVimble,
 And Sanctifi'd thy Gill with Hannah's Thimble,
 Thou'st left thy old bad Company of Vermin,
 The swearing Porters, and the drunken Carmen,
 And the new drivers of the Hackney Coaches,
 And now tak'st up with sage discreet debauches;
 Thou freely drop'st upon Gold Chains and Fur,
 And Sots of Quality thy Minions are.
 No more shalt thou foment an Ale-house-brawl,
 But the more sober Riots of Guild-Hall;

Where

*Where by thy Spirits fallible Direction,
 The Reprobates once pos'd for an Election:
 If this trade hold, what shall we Mortals do,
 The Saints Sequester even our Vices too.
 For since the Art of VVboring's grown precise,
 And Perjury has got demurer Eyes,
 'Tis time, high time to circumcise the Gill,
 And not let Brandy be Philistian still.
 Go then thou Emblem of their torrid Zeal,
 Add flame to flame, and their stiff tempers kneal,
 'Till they grow ductile to the Publick VVeal.
 And since the Godly have espous'd thy cause,
 Don't fill their heads with Liberty and Laws,
 Religion, Priviledges, Lawless Charters,
 Mind them of Falstaff's Heir-Apparent-Garters,
 And keep their outward man from Ketchesquarters.
 One caution more, now we are out of Hearing,
 Many have dy'd with drinking, some with swearing:
 If these two Pests should in conjunction meet,
 The Grass would quickly grow in e'ry Street:
 Save thou the Nation from that double blow,
 And keep thy fire from Salamanca T. O.*

F I N I S.



DIRECTIONS
FOR
BREWING
MALT LIQUORS.

SHEWING,
What Care is to be taken in the Choice
of *Water, Malt, and Hops*: And in what
Proportions they are to be Mixed, and how
Boyled and Fermented, for Making the best
March, or October Beer, Strong Ale, &c.

In a Method never before Publish'd.

Useful for all such as are Curious in *Malt*
L I Q U O R S.

By a Countrey Gentleman.

W I T H
A *SATYR* upon *BRANDY*,
By another Hand.

L O N D O N,

Printed for J. Nutt, near Stationers-Hall. 1700.



DIRECTIONS

FOR

Brewing.

THEY who are Curious in *Malt Drinks*, as it is fit every one shou'd be that uses 'em, (unless their Circumstances be such that they must be contented with what they find) generally make out all their first *Wort* alone into *Ale* or *strong Beer*. *Ale* is the only word used in the *North* of *England* for strong *Malt Drink*: And was likely the only strong Drink our fore-fathers made of *Malt*. This was the *English Beverage* Celebrated by our *Poets*, who yet cou'd

not forbear to blame the foul Thickness of it.
One says,

*Men drink it Thick, and piss it Thin,
Mickle Faith by St. Eloy, what leaves it within?*

Which seems thus Translated by another, unless good Wits jump.

*Nil spissius illa,
Dum bibitur, nil clarius est dum mingitur; ergo
Constat quod multas faeces in ventre relinquit.*

Indeed before the use of *Hops*, which began in *England* about the Year 1540, as I take it, it was hard to Brew Drink, which wou'd be Fine before it was Eagar. All good *Ale* is now made with some small mixture of *Hops*, tho' not in so great Quantity as Strong *Beer*, design'd for longer keeping: And is for that purpose usually Brewed in *March* or *October*.

He that will Brew well, must be careful in the Choice of his *Water*, *Malt*, and *Hops*, and in the manner of mixing and fermenting them.

i. As

1. As to *Water*, *Pond-Water* and other *Standing Waters* in fat Grounds, if clear and sweet, make a Stronger Drink with less *Malt*, then *Well*, *Pump* or *Conduit Waters*: Tho' any of these that are not hungry, and will bear *Sope*, and lather without breaking, are good. *Rain-Water*, which Lathers the best of any, if saved from *Lead*, or where it brings no *Salt* from the *Mortar* over which it may pass, is good to Brew *Ale* to be drank new, but is not proper for Drinks to be long kept: It being very apt to change, and unless kept cool and in great Quantities, as in the Leaden Cesterns in Cellars at *Amsterdam*, will corrupt and putrify the soonest of any *Water*. *Thames-Water* taken up about *Greenwich* at Low Water, where it is free from all Brackishness of the *Sea*, and has in it all the Fat and Sullage from this great City of *London*, makes very Strong Drink. It will of it self alone, being carryed to *Sea*, ferment wonderfully, and after its due Pur-gations, and three times stinking (after which it continues sweet) it will be so strong, that Several Sea Commanders have told me it wou'd burn, and has often fuddled their Marriners. Other Commanders have

denied this, which I thought I had Reason to impute to their want of Observation. However I conceive *Thames-Water* is by no means fit to Brew Strong *Beer* to keep, for that, let the Drink which is Brewed of it be never so clear, it is apt on any considerable and sudden change of Weather, to ferment and grow foul. And I take this for a Rule, That no *Malt Drink* is truly good, which is not perfectly fine. Upon the whole, the best Liquor to Brew with, is that which is taken from a small clear Rivulet or Brook, undisturb'd by Navigation or Fording: And taken up in dry Weather, when no Rain has lately washed the Banks. My first two Brewings were made of such Water; which with all my Care and Experience I cou'd never equal since: Though I have been very curious and sent some Miles for my Water. Possibly much the best Water in *England* is that at *Castleton* in *Derbyshire*, commonly called, *The Devils Arfs*, &c. Which Owzes from a great Rock, covered over with a shallow Earth and short Grass a top. It is incredible that so much Water shou'd percolate through so vast a Quantity of one Rocky Stone, were it not obvious to any one who goes into Pools Hole, where he
will

(5)
will find the Water continually dripping through the Top, and running down the Sides, till it makes a kind of Chrystal Rivulet at the Bottom of that Prodigious Rocky Concave. I have seen the *Ale* made of *Castleton-Water* as clear in three days after it was Barrelled, as the Spring-Water it self, and impossible to be known by the Eye in a Glafs from the finest *Canary Wine*. *Brewers* shou'd be as curious in the Choice of *Water* for their first *Wort*, as *Cooks* are for their Boyling of *Yellow Pease*. For as some *Waters* will never Boyle them soft, so will they never make good *Ale* or Strong *Beer*. However if the best *Water* be not to be had, but at too great a distance and charge, you may for your Second and Third *Worts* which are quickly spent, and used only for Table Drink, make use of such *Water* as you have near at hand.

2. As for your *Malt*. The North Country *Malts* from *Nottinghamshire, Derbyshire, Leicestershire, Cheshire, Lancashire, &c.* are the best, especially for *Ale*, but are generally too slack dried for *March* or *October Beer*, which is to be kept at least half a Year before it be Drank. The Goodness of these *Northern Malts* proceeds partly from the
Cern

Corn which grows on Grounds more rested than in the *Southern Countrys*, where the Rents are more racked, and the Grounds more worn by continual Sowing; and partly from the *making*, in which they take more time then in other parts, and dry it leisurely with *Pit Coal Charkt*, called in some Places *Coak*, and in others *Culm*, which is sweet and gives a gentle and certain heat. Whereas in the *South East* parts, they dry their *Malt* with Straw, which is hard to keep to a moderate and equal heat. And in the *West Countrys* with *Wood*, which gives a most ingrateful Tack to such as are not by Custom familiarized to it. Besides, in the *North*, they do not run out their *Barley* in *Malting* to such Lengths as in other parts: And in Grinding they set their Upper *Millstone* so high, that it breaks off only the Tops of the *Cleavel*, which makes their Drink so fine. And *Malt* small ground will never make fine Drink.

There is possibly some Reason for the Observation, that *Malt* mixt of several kinds makes the best Drink: And that it ought to ly ground in the Sacks three or four days before it is used.

Your

13. Your *Hops* must be bright, well scented, well dried, cured and bagg'd; and generally speaking are best about a Year old. They are a very uncertain Crop, and consequently of a very uncertain Price, sometimes sold at about Six Pence, sometimes at about half a Crown *per Pound*. And I believe it may be truly said, That better *Hops* have been sold for Six Pence or under, then ever were sold for Two Shillings *per Pound*, or upwards. Indeed all Fruits are best when they are cheapest. Those Years that are kindest for the Quality allways producing the greatest Quantity. So that it is certainly a wise way, on all accounts, to furnish one self well with *Hops* well cured in a cheap Year.

4. In your mixing and fermenting all these three together, That is in *Brewing*, after you have made a discreet Choice of your *Matterials*; You must first consider what sort of Drink you design to Brew, and accordingly proportion your Quantities. If you design your first *Wort* for strong *Ale* or *March* or *October Beer*; you must proportion five Gallons of Drink to every

Bushell of *Malt* (that is to say avoiding Fractions) Eleven Bushells of *Malt* to an *Hogshead* of *Ale* or *Beer*. But it must be remembred, that in so great a disproportion of *Malt* to Drink, as Eight to Five, almost a Third of your Liquor in the first *Wort* will be absorbed by the *Malt*, never to be return'd, and an allowance is to be made of about a Sixth Part to evaporat in Boiling. So that if you expect to clear a *Hogshead* of Drink, that is fifty four Gallons, from your first *Wort*, you must put into your *Mesch-Tub* near Ninety Gallons of Liquor. But for your Second or Third *Worts*, the Goods being wet before, you need put up no more Liquor then you intend to make Drink, except an allowance of about a Tenth part for wast, that not Boiling so long as your first *Wort*. And you may of your Second *Wort* make one *Hogshead* of good middle *Beer* or *Ale*, as Strong as the common *Ale-house* Drink in *London*. And your Third *Wort* will make one *Hogshead* of good Small *Beer*.

I propose in this Case the drawing of Three *Worts* because of the great Quantity of *Malt* to a smaller of Liquor. Other-
wise

wise in Ordinary Brewings, where you design not very strong Drink, six or seven Bushells of *Malt* will make one Hogshead of good strong, and another of small Beer. And in such case, two *Moaks* will as well take out the strength of your *Malt*, as three in the other.

It is certain that in either of these cases your *Malt* will not be run out as the Common Brewers uses to be, so that if you take up an handful of the Graines you may blow them out of your hands with your Breath.

But it is hardly worth any Man's while, who is not indigent, to run it out farther for his own Family; for all the Drink you can after make of it, will be but like the washing of Graines, it will prove poor Stuff. and if not drank presently, it will be apt to stink, unless you mix it with some of the former *Worts* which it will but spoil. Besides, what you leave in your Graines, by the way proposed, is not lost. For if you live in the Countrey, they will nourish your Cattle and Swine, and if in a Town, the Poor will be gratified by letting them put

up some cold Water to run through them, which they will carry away cold in Pails, and boyl at home without any trouble or charge to you ; so that in effect you really relieve the Poor only with a little of your Cold Water which they themselves draw.

The Proportion of *Hops* may be half a Pound to an Hogshead of strong *Ale* ; one Pound to an Hogshead of ordinary strong *Beer* to be soon Drank out : And two Pounds to an Hogshead of *March* or *October Beer* : And for the after *Worts* , which are not to be kept long, what comes from the first *Wort* will serve well enough to Boyl again with them.

If you put into your first *Wort* a greater Proportion of *Hops*, and Boyl them all the while your *Wort* Boyls, you will make it too bitter : But I conceive it adviseable to double the Proportion, by taking out the first parcell when your *Wort* has Boyled half the time you design it, and then adding the same Quantity of fresh *Hops* to continue Boyling till you take your *Wort* out of the Copper. This will somewhat encrease your Charge, but that will be very inconsidera-

inconsiderable, if you furnish your self in a cheap year of *Hops*.

By this way you will take out only the fine quick Spirits of the *Hops*, (which I take to be an useful and wholesome Vegetable) and will have a good Quantity left fit for the use of the Poor, if you give them the last running from your *Malt*.

Hitherto of the Qualities and Proportions of your Materials. Now concerning the manner of putting them together.

After you have put your Liquor in your Copper, strew an handful two or three of *Bran* or Meal upon it, not so much to strengthen your Liquor, as to make it heat quickly, for simple Water alone will be long ere it Boil. But you must take your Liquor out of the Copper when it begins to simmer, and not suffer it to Boil: For though it were granted that the Boyling did no harm to your Liquor, by evaporating the Natural Spirit of the Water (which it likely does) yet 'tis a needless expence of Fuel and Time, first to make it too hot, and after to stay till 'tis cooler again. For
you

(12)
you must by no means mix your Malt with
Boyling hot Liquor, which will make the
Malt clot and cake together, and the most
flowery parts of it run whitish, glewy and
fizzy, like Saddlers Paste, so that it will
never mix kindly, and give out its Strength
equally to the Liquor.

I had not dwelt so long on this Head,
but that I know many put their Malt first
in the Mesch-Fat, and then pour in their
Liquor for the first Wort, which is indeed
necessary in the Second and Third Worts.

The contrary Practice of putting in your
Liquor first, has these Advantages.

First, You can never otherwise guess when
your Liquor is just cool enough to be
mingled with your Malt: But in this case,
you have a certain *Criterion* and Rule to
judge by, that is, you must let your Liquor
remain in your Mesch-Fat till the Vapour
from it be so far spent, that you can see your
Face in the Liquor: And then pouring
your Malt upon it, you have this farther Ad-
vantage, that you keep your Liquor longer
hot, and it sinks gradually, distributing it's
strength

strength to your Liquor equally, without matting, and if it does not descend fast enough of it self, you must press it down with your Hands or Rudder, with which you use to stir your Moaks. This must be done by degrees: Always remembering, that you shake your Sacks before you remove them over the sides of your Mesch-Fat, to get out the Flower of your Malt which sticks to them. And after all your Malt is settled, and your Liquor appears above it, you must put up in your Mesch-Fat as much more hot Water out of your Copper, as will make in all Ninety Gallons, for one Hogshead. Then stir it almost without ceasing, till it has been in the Mesch-Fat about two hours from the first putting up your Malt, in which your Servants may help and relieve one another.

After this pull out your Rudder, and putting a little dry Malt a top, cover it close, and let it stand half an hour undisturbed, that it may run off clear, and the Malt being sunk to the bottom, the Liquor a top will run through it all again, and bring away the strength of it. After this, you must lift up your Tap-staffe, and let
out

out about a Gallon, not into your Tub underneath or Under-back, which is to receive your Wort, but into your long-handle Jett, and put it up back again, stopping your Tap hole: This do two or three times, till you find it runs clear, which it will not do at first, though your Tap-hose be never so well adjusted.

Throughout the whole Course of your Brewing, you must be very careful to do all you can to promote the Fineness and Clearness of your Drink.

In the North of *England*, where much the best Malt-Drink is made, they are so careful of making their Drink Fine, that they let their first Wort stand in their Receivers till it is very clear, all the gross parts being sunk to the Bottom, this they continue to do about Three hours in Summer, and Ten or Twelve hours in Winter, as occasion requires, which they call *Blinking*, after which, leaving the Sediment behind, they only lade out the Clear Wort into the Copper. Which Custom is peculiar to the North and wholly unpractised in other parts.

When

When all is run out into your Receiver or Under-Back, Lade or Pump out your Second Liquor, ordered so as to be just then ready to Boyl, on your Moaks: And putting your first Wort into your Copper again, let it Boyl reasonably fast (which Boiling the *Hops* put on it will much accelerate) for about one hour and an half, for *March* or *October* Beer to be kept long: And one Hour for strong *Ale*, to be Drank new. I know that a longer Boiling is generally advised. But I shall answer that when I come to shew the Reasons why Common *Brewers* seldom or never make good Malt Drinks. I advise the *Wort* rather to be Boyled reasonable fast, for the time, then to stand so long to simmer, because common Experience shews it waists less, and Ferments better, after so long Boiling, than Simmering. And this Observation, grounded on Experience, will not seem strange to *Philosophers*; who know, that Six hours of a kindly insensible Perspiration shall make a Man lighter in the Morning, then so many hours of ordinary Sweating.

Possibly a less Fermentation and greater Evaporation is best for the Blood, and greater Fermentation and less Evaporation is best to prepare other Liquors for a new Fermentation.

Your first *Wort*, being thus Boyled, must be Pump'd or Laded off into one or more Coolers or Cool-Backs, in which leave the Sullage behind, and let it run off Fine. The more Coolers, and the thinner it stands, and the sooner it Cools (especially in hot Weather) the better : Let it run from your Cool-backs into your Tun very Cool, and set it not there to Work, in Summer, till 'tis as cool as Water. In Winter it must be near Blood Warm, at least the Bowl in which you put your *Yest* to set the rest on Working must have a mixture of *Wort* hot enough to make it all Ferment. When you find it begins to work up thick to a *Yest*, mix it again with your Hand Jett, and when it has workt it self a Second time to a *Yest* : If you design'd it for *Ale* and speedy Drinking, and hopp'd it accordingly, then beat in the *Yest* every five hours, for two days together, in the Summer time,
or

or more, according as the Weather is; and for three or four days in Winter, covering your Fat close that it fall not in your working Tun.

When your *Yest* begins to work sad, and upon turning the Concave of your Bowl downwards sticks fast to the inside, then, skimming off the *Yest* first, cleanse the rest into your Vessel, leaving all your Dregs in the bottom of your Tun, and putting only the clear up: After it has a little Fermented in your Vessel, you will find it in a few days fine, and fit for your Drinking. Though according to the Quantity of your *Hops* you may proportion it for longer keeping.

If you Brew in *March* or *October*, and have hopp'd it for long keeping, you must then upon its Second Working to a *Yest* (after once beating in) cleanse it into your Vessel with the *Yest* in it, filling it still as it works over, and leaving when you stop it up a good thick head of *Yest* to keep it.

In Brewing *March* and *October Beer*, it is advisable to have large Vessels bound with Iron Hoops, containing Two, Three, or Four Hogsheads, according to the Quantity you intend to make, putting all into one Vessel. This sort of Drink keeping, digesting and mellowing, best in the largest Quantities.

Your Vessels must be Iron hoop'd, else your *March Beer* will be in danger to be lost or spoiled: Leaving your Vent Peg allways open Palls it, and if it happen to be fastned but Six Hours together in the Summer, a sudden Thunder or Stormy Night may happen next Morning to present you in your Cellar an empty Vessel and a covered Floor.

It is pretended that *March* is the best Month for Brewing, and the Water then better than in *October*: But I allways found that the *October Beer*, having so many cold Months to digest in, proves the better Drink by much; and requires not such watching and tending as the *March Beer* does, in opening and stopping the Vent hole on every change of Weather.

Many

Many Countrey Gentlemen talk of, and magnify their stale *Beer* of Five, Ten, or more years old. 'Tis true more *Malt* and *Hops* than I propose will keep Drink longer than I use to do: But to small purpose; for that it will not exceed mine in any thing desirable, except such an extraordinary Strength as few Men care for. I allways broach mine at about Nine Months end, that is my *March Beer* at *Christmas*, and my *October Beer* at *Midsummer*, at which times it is generally at the best. But will keep very well in Bottles a year or two more. Stop your Vessel close with *Cork*, not *Clay*, and have near the Bung-hole a little Vent-hole stop'd with a Spile, which never allow to be pull'd out, till you Bottle or draw off a great Quantity together. By which means it is kept so close stop't, that it foushes violently out of the Cock for about a Quart, and then stops on a sudden, and Perles and Smiles in a Glas like any Bottled *Beer*, though in the Winter time. But if once you pull out the Vent-Peg, to draw a Quantity at once, it will sensibly loose this Briskness; and be sometime before it recovers it.

I propose no Directions for the Second and Third Worts: He that can manage the first well, can never fail in the rest. Your Third *Wort*, being poured on hot Goods, may be only Cold Water.

Now that I have given the best Directions for Brewing that readily occur to my Memory. I come to shew the Reasons why Common *Brewers* very seldom or never make good Drink. This I know is generally attributed to their Underboiling their strong *Worts*, which to prevent, some *Brewers* to their Detriment, and no manner of Advantage to their Drink, have Boyled them three hours, which is thrice as long as needed; and all to no purpose.

In most (if not all) of the Northern Counties there are few or no Common *Brewers*. The Inn-keepers and Publick *Ale Houses* Brewing what they Retail in their own Houses. And Private Families for themselves. And in all these Counties 'tis as rare to find any ill Malt Liquors, as it is to find good in *London*, or the adjacent Counties.

This

This may serve to shew the Mistake of those, who ground their Computation of the Number and Proportion of Inhabitants, between some Southern and Northern Cities and Towns, on the Kings Renew of Excise arising out of them. For that, in the Eastern and Southern Counties, abounding in Common *Brewers*, almost all the Inhabitants of Cities and great Towns there, and the meaner People of their Neighbourhood, take their Drink of the Common *Brewers*, clog'd with Excise; which few or none of all the Inhabitants of the Northern Towns do.

In the *West* of England, They have some Common *Brewers*, but not in Proportion to the *East* and *South*. In most parts of the *West*, their Malt is so stench'd with the Smoak of the Wood, with which 'tis dryed, that no Stranger can endure it, though the Inhabitants, who are familiarized to it, can swallow it as the *Hollanders* do their thick Black Beer Brewed with Buck Wheat.

In

In *Bristol* they have considerable Quantities of *Malt* by *Sea* from *Wales*, some dried with *Straw*, some with *Coak* or *Culm*, much the best way of Drying. Yet have little good Drink made from it, which is generally imputed to the Brackishness of their Water.

In short, the Reason why Publick and Common *Brewers* seldom or never Brew good Drink is, That they Wet more Malt at once, then 'tis possible they can have Vessels and Servants enough to Work, and let it cool enough to Ferment kindly. And withall, Brew so often, that they cannot sufficiently, between one Brewing and another, cleanse and scald their Brewing Vessels and Barrels, giving them due time to dry, but that they will retain such a Rest as will always Char and Sour their Liquors. And the Mischiefs accruing by such Neglects are incredible to Persons unexperienced.

My

My Brewers have been so cautious in this Particular, that if any Servants of the House, have by accident made use of any long-handled Jett, hand Jett, or Pail, with cold Water during the Brewing; they have scalded it a new, and let it dry before they wou'd use it again.

This Practice of the Common *Brewers* Wetting such vast Quantities of *Malt* at once, and Brewing so often, puts me in Mind of the Story of *Melibeus* the *Mantuan Shepherd* in *Boccalin*, who tells the *Roman Empire*, that whilst he and *Menalcas* kept Five Hundred Sheep each, as they long did, they made a Crown a Head by the Wooll and Lambs, amounting to Five Hundred Crowns *Per Annum*. But when *Menalcas*, from Covetousness doubled his Flock to a Thousand Sheep, expecting to get thereby a Thousand Crowns a Year, he made but Three Hundred Crowns; and when he trebled his Flock, and made them Fifteen Hundred Sheep, he got nothing.

This is but a Course *APPLICA-
TION* of a *STORY*, fram'd with a
great Contexture of Witt and Political
Wisdom;

A

A
SATYR
UPON
Brandy.

F Arewel damn'd Stygian Juyce, that dost bewitch,
From the Court Bawd, down to the Country
Thou Liquid Flame, by whom each firey Face (Bitch;
Lives without Meat, and blushes without Grace,
Sink to thy Native Hell to mend the Fire,
Or if it please thee to ascend yet higher,
To the dull Climate go, from whence you came,
Where Wit and Courage do require your Flame;

D 2

Where

Where they Carouse it in Vesuvian Bowls,
 To crust the Quagmire of their spongy Souls:
 Had Dives for thy scorching Liquor cry'd,
 Abraham in Mercy had his suit deny'd;
 Had Bonner known thy force, the Martyrs Blood
 Had hiss'd in thee, and sav'd the Nations Wood:
 Essence of Ember, scum of melting flint,
 With all the Native sparkles floating in't;
 Sure the Black Chymist with his Cloven foot
 All Aëna's simples in one Lymbeck put;
 And double still'd, nay quintessenc'd thy Juyce,
 To charcoal Mortals for his future use.
 Fire-ship of Nature, thou hast doubly wound,
 For they that grapple thee, are burnt and drown'd:
 As when Heaven prest th' Auxiliaries of Hell,
 A flaming storm on cursed Sodom fell,
 And when it's single Plagues would not prevail,
 Egypt was scalt with kindled Rain and Hail.
 So Natures feuds are reconcil'd in thee,
 Thou two great Judgments in Epitome.
 God's past and future Anger breathe in you,
 A Deluge and a Conflagration too.
 View yonder Sott, I do not mean Shr--Sh--
 Grilled all o're, by thee, from head to foot,
 His greasie Eye-lids shear'd above their pitch,
 His Face with Carbuncles, and Rubies rich,
 His Skull instead of Brains supply'd with Cinder,
 His Nose turns all his Handkerchiefs to Tinder;
 He

He breaths like a Smiths Forge, and wets the fire
 Not to allay the flame but raise it higher.
 His Stomach don't concoct, but bake his Food,
 His Liver even vitrefies his Blood;
 His trembling hand scarce beaves his Liquor in,
 His Nerves all crackle under's Parchment Skin;
 His Guts from Natures drudgery are freed,
 And in his Bowels Salamanders breed.
 He's grown too hot to think, too dull to laugh,
 And steps as tho' he walkt with Pindars staff.
 The moveing Glass-house lightens in his Eyes,
 Singes his Cloaths, and all his Marrow fries,
 Glows for a while, and then in Ashes dyes.
 Thus like a sham Prometheus we find,
 Thou stol'st a Fire from Hell, to kill mankind.
 But stay, least I the Saints dire Anger merit,
 By stinting their Auxilliary Spirit;
 I am inform'd, whate're we wicked think,
 Brandy's reform'd, and turn'd a godly Drink.
 E'er since the Publick Faith for Plate did VVimble,
 And Sanctifi'd thy Gill with Hannah's Thimble,
 Thou'st left thy old bad Company of Kermin,
 The swearing Porters, and the drunken Carmen,
 And the new drivers of the Hackney Coaches,
 And now tak'st up with sage discreet debauches;
 Thou freely drop'st upon Gold Chains and Fur,
 And Sots of Quality thy Minions are.
 No more shalt thou foment an Ale-house brawl,
 But the more sober Riots of Guild-Hall;

Where

(275)
Where by thy Spirits fallible Direction,
The Reprobates once pal'd for an Election,
If this trade hold, what shall we Mortals do,
The Saints Sequester even our Vices too,
For since the Art of Whoring's grown precise,
And Perjury has got demurer Eyes,
'Tis time, high time to circumcise the Gill,
And not let Brandy be Philistian still.
Go then thou Emblem of their torrid Zeal,
Add flame to flame, and their stiff tempers kneal,
'Till they grow ductile to the Publick Veal.
And since the Godly have espous'd thy cause,
Don't fill their heads with Liberty and Laws,
Religion, Priviledges, Lawless Charters,
Mind them of Falstaff's Heir-Apparent-Quarters,
And keep their outward man from Ketches quarters,
One caution more, now we are out of Hearing,
Many have dy'd with drinking, some with swearing,
If these two Pests should in conjunction meet,
The Grass would quickly grow in e'ry Street:
Save thou the Nation from that double blow,
And keep thy fire from Salamanca T. O.

FINIS.







S. Nicholls delin: et sculp:

K. THE
Vintner's MYSTERY

DISPLAY'D:

OR, THE

WHOLE ART

OF THE

WINE TRADE

L A I D O P E N

In which are the necessary Directions for rightly managing all Sorts of Wines, so as to render them Bright and Good; or to restore them when they prove defective in any Way whatsoever.

A Treatise absolutely necessary for private Families; for by this alone, any Gentleman, or other Person, may Manage, Preserve, or Cure their Wines themselves.

In this is contain'd all the Methods now in Use among Vintners or Wine-Coopers, both at Home and Abroad; and many of them such, as were never made publick before. To which is added; a never-failing Method to restore all Sorts of other Liquors when Pall'd, Dead, or Souer, so as to make them Palatable, Bright, and Good.

a. 3424.

L O N D O N:

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THE
AMERICAN MYSTERY
DISPLAY, D.
OR, THE
WHOLE ART
OF THE
WINE TRADE



for which are necessary. The first of these is a
highly managed and carefully selected stock of
to render them more useful and to render them
more useful when they are used in the
and they are
A Treatise absolutely necessary for private
Families; for by this alone, any Gentle-
man, or other Person, may manage his
Tavern, or Canteen, and his Wine himself.
In this, contained all the best and most
of the strong Wines of France, and of the
of the Rhine, and of the Moselle; and of
the best, as were never made before.
To which is added, a new and
improved method to select all sorts of other
Liquors when they are Dead, or Sour,
in order to make them palatable, and
and good.



THE
VINTNER's
MYSTERY
Display'd, &c.



S there is no Necessity
to make any other In-
troduction, to lay open
the Design of the fol-
lowing Trèatise, than
what is discover'd in
the preceding Page, I shall immediate-
ly enter upon discussing the Points be-
fore

fore me, in as evident, and concise a Manner, as the Nature of so useful and beneficial a Subject will admit of.

I shall divide the Whole into Four Parts; which will fully comprehend whatever, relating to Wines, regards either Knowledge or Practice.

First, I shall consider the *Natural Purification* of Wines, whereby, of themselves, they pass from a State of Crudity and Turbulency, to that of Maturity, by Degrees growing fine, bright, and drinkable.

Secondly, I shall examine into the unseasonable Workings, Frettings, and Sickneses, to which Wines are expos'd, from either internal or external Accidents.

Thirdly, I shall search into their State of Decay, as it relates to a degenerating from Goodness and Pleasantness, to Pallness, or Soureness: And,

Fourthly,

Fourthly, Which is more material than all the rest, I shall set down several Methods and Medicines to be us'd for the remedying every Ill State that Wines may be brought into.

As to the *First* of these Heads, *viz.* The *Natural Clarification* of new Wines, two Things occur, not unworthy Consideration; the *Manner* how, and the *Cause* by which the same is effected.

As for the *Manner*; give me leave to observe, That Wine, while yet in the *Must*, is usually put into open Vessels, the Abundance and Force of the Spirits, or the more subtle and active Parts therein contained, being then so great, as not to endure Imprisonment in close Vessels, at a Time it appears troubled, thick, and feculent; all Parts of it being violently moved and agitated, so that the whole Mass of Liquor seems to boil like Water over a Fire. This Tumult being in some Degree composed, and the wilder Spirit sufficiently evaporated, they then pour the

Must into close Vessels, there to be fin'd farther by Continuance of the Fermentation, reserving the *Froth* or *Flower* of it, and putting the same into small Casks hooped with Iron, lest otherwise the Force of it might break them. This Flower thus separated, is what they name *Stum*, either by Transposition of the Letters into the Word *Must*, or from the Word *Stum*, which in *High-Dutch* signifies *Mute*, because this Liquor is hinder'd from that which would speak its Goodness and Wholesomeness. This done, they leave the rest of the Wine to finish its Fermentation; during which it is probable, that the spirituous Parts impel and diffuse the grosser up and down, in a confused and tumultuous Manner, until all being disposed into their proper Regions, the Liquor becomes more pure in Substance, more transparent to the Eye, more piquant and grateful to the Palate, more agreeable to the Stomach, more nutritive to the Body.

The

The Impurities thus separated from the Liquor, are, upon chymical Examinations, found to consist of *Salt*, *Sulphur*, (each of which is impregnate with some *Spirits*,) and much *Earth*; which being now dissociated from the purer *Spirits*, either mutually cohere, coagulate, and affix themselves to the Sides of the Vessel, in Form of a stony Crust, which is called *Tartar* and *Argol*, or sink to the Bottom in a muddy Substance, like the Grounds of Ale or Beer, which is called the *Lees* of Wine. And this, in short, I conceive to be the Process of Nature in the *Clarification* of all Wines, by an orderly Fermentation.

As for the principal *Agent*, or *efficient Cause* of this Operation, I persuade my self, it will easily be admitted to be no other but the *Spirit* of the Wine it self; which, according to its Nature, restlessly moving every Way in this Body of Liquor thereby dissolves that common Tie of Mixture, whereby all the

heterogeneous Parts thereof were combined and blended together ; and having gotten it self free, at length abandons them to the Tendency of their own Gravity and natural Proprieties ; which they soon obeying, each Kind conforsts with their like, and betaking themselves to their severall Places or Regions, leave the Liquor to the Possession and Government of its noblest Principle, the Spirit. For, this Spirit, as it is the Life of the Wine, so doubtless it is also the Cause of its Purity and Vigour, in which the Perfection of that Life seems to consist.

From the natural Fermentation of Wines, we pass to the *accidental* ; from their State of *Soundness*, to that of their *Sickness* : Which is our *Second* general Head.

We have the Testimony of daily Experience, that many Times even good and generous Wines are invaded by unnatural and sickly Comotions, or (to speak more in the
Dia-

Dialect of *Wine-Coopers*) *Workings*; during which they are turbulent, thick, unfavoury, and unwholesome; and after which they undergo sundry *Alterations* for the worse.

The *Causes* of these may be either *internal* or *external*.

Among the *internal*, I should assign the chief Place to the excessive Quantity of *Tartar*, or of *Lees*; which containeth much of *Salt* and *Sulphur*, (as hath already been hinted,) and continually sends forth into the Liquor abundance of quick and active Particles, that, like *Stum*, or other adventitious Ferment, put it into a fresh Tumult or Confusion; which if not in Time allayed, the Wine either grows *Rank* or *Pricking*, or else turns *Soure*; by reason that the *Sulphur*, being over-much exalted over the rest of the Ingredients, predominates over the pure Spirits, and infects the whole Mass of Liquor with Sharpness, or *Acidity*; or else it comes to pass, that the Spirits being spent and flown away, in the

the Commotion, and the *Salt* dissolved and set afloat, obtains the Mastery over the other similar Parts, and introduceth *Rankness* or *Ropiness*. Ay, even though these Commotions, chance to be suppressed before the Wine is thereby much depraved, yet do they always leave such evil Impressions, as more or less alienate the Wine from the Goodness of its former State, in Colour, Consistence, and Taste. For hereby all Wines acquire a deeper Tincture, or a thicker Body or Consistence ; *Sacks* and white *Wines* changing from a clear White to a cloudy Yellow ; and *Claret* losing its bright Red for a dusky *Orange* Colour, and sometimes for a Tawny. In like Manner they degenerate also in Taste, and affect the Palate with Foulness, and a very unpleasant Roughness.

Among the *external* Causes, are commonly reckoned the too-frequent or violent *Motion* of Wines, after their Settlement in their Vessels, immoderate *Heat*, *Thunder*, or the Report of *Cannons*, and the *Mixture* of
any

any *exotick* Body, which will not agree and incorporate with them, especially the *Flesh* of *Vipers*, which I have frequently observed to induce a very great *Acidity* upon even the sweetest and fullest-bodied *Malaga* and *Canary* Wines. Yet, under favour, I should think all these foreign Accidents to be rather Effects, than *Causes* of the Evil that follows upon them; because these Events seem to arise immediately and principally from the Commotion and Diffusion of the *Sulphurous* or *Saline* Impurities formerly separated from the Liquor, and kept in due Subjection by the genuine and benign Spirits. But this is no Place, nor is it my Inclination, to insist upon Nicety of Terms, which might indeed start Matter of subtle Speculation, but could afford little or nothing of Profit to our present Enquiry. Which brings me in the next Place, to the

Third previous Consideration, *viz.* the *Palling* or *Flatting* of Wines, and their Declination toward *Vinegar*, before they have attained to the State
of

of Maturity and Perfection. Of this the grand *Cause* seems to be their *Fejuneſs* and *Poverty* of Spirits, either native or adventitious.

Native, when the *Grapes* themselves are of a poor and hungry Kind, or gathered unripe, or nipp'd by early Frosts, or half ſtarved in their Growth by a dry and unkindly Season.

Adventitious, when the Liquor, rich, perhaps, and generous enough at firſt, comes afterwards to be impoveriſhed by Loſs of Spirits, either by *Oppreſſion*, or by *Exhauſtion*.

The Spirits of Wine may be *oppreſſed*, when the Quantity of Impurities or Dregs, with which they are combined, is ſo great, and their Crudity, Viſcoſity, and Tenacity ſo contumacious, that they can neither overcome them, nor deliver themſelves from their Adheſion; but are forced to yield to the Obſtinacy of the Matter on which they ſhould operate, and ſo to remain unactive and clogg'd; as may be exemplified

fied in the coarse Wines of *Moravia*; which, by reason of their great Roughness, seldom attain to a due Exaltation of their Spirits, but still remain turbulent, thick, and in the State of Crudity, and therefore easily pall; in which Respect they are condemned by some *Physicians*, as administering Matter for the *Stone* and *Gout*, they yielding more of Tartar than any other Wines.

The Spirits of Wine may be *exhausted* or consumed either suddenly, or by Degrees: *Suddenly*, by *Lightning*; which doth spoil Wine, (as I conceive,) not by *congealing* or *fixing* of its Spirits; for then such Wines might be capable of Restoration, by such Means as are apt to reinforce and volatilize the Spirits again, contrary to what hath been found by Experience; but more probably by putting the Spirits to flight, so as to leave the Liquor dead, pall'd, and never to be revived by any new Supply.

The

The Spirits of Wine may be exhausted by *Degrees*, two Ways; by *unnatural Fermentation*, of whose evil Effects something hath already been said; or by *Heat* from without; of which we have an Instance in the making of *Vinegar*. Which commonly is done by setting the Vessels of Wine against the hot Sun; which beating upon the Body of Liquor, and rarefying the finer Parts of it, gives Wings to the fugitive Spirits to fly away, together with the purer and more volatile *Sulphur*, leaving the Remainder to the Dominion of the *Salt*, which soon debaseth and infecteth it with *Sourness*. This being the common Manner of turning Wine into *Vinegar*, and practised (for ought I could ever learn to the contrary) in all Ages, and all Countries, I make a Doubt, whether Spirit of Wine may be drawn out of *Vinegar*, notwithstanding it hath been delivered as practicable by the Learned.

The

The *Times of the Year* when Wines are observed to be most prone to ferment and fret, and then to grow *Qually*, (as they call it,) that is, turbulent and foul, are *Midsummer* and *Allhallontide*, when *Vintners* rack them from their gross Lees, especially *Renish*, which commonly grows sick in *June*, if not rack'd; and they choose to do it in the Wane of the Moon, and fair Weather, the Wind being northerly.

Having thus succinctly recounted the most remarkable Distempers of Wines, and their respective Causes, it is time for me to proceed to their usual Remedies; which is the *Fourth* and last Part I proposed to consider.

To begin therefore with some of the *Artifices* used to Wines when yet in the *Must*, it is observable, that although to the raising of Fermentation in them, at that Time, there be not so much need of any additional Ferment, as there is in the Wort of *Ale*, *Beer*, *Hydromel*, *Metheglin*, and
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other Sorts of Drink, familiar to us in *England*, because the Juice of the Grape is replenished with generous Spirits, sufficient of themselves to begin that Work; yet it is usual, in some Countries, to put Quick *Lime* either upon the Grapes, when they are pressing, or in the Must, to the end, that by the Force and Quickness of its saline and fiery Particles, the Liquor may be both accelerated, and assisted in working. For the same Reason perhaps it is, that the *Spaniards* mix with their Wines, while they are yet flowing from the Press, a certain Thing they call *Gieffo*, which I take to be a kind of *Gypsum*, or White Lime Plaister, whereby the Wines are made durable, of a paler Colour, and more pleasant Taste. Others put into the Cask Shavings of *Fir*, *Oak*, or *Beech*, for the same purpose; and others Vinegar; either of which will answer the same End.

Again; though the first Fermentation succeeds generally well, so that the whole Body of Liquor is thereby delivered from the gross Lee, yet
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sometimes it happens, either through Scarcity of Spirit at first, or through immoderate Cold, that some Part of those Impurities remain confused and floating. Now, in this Case, *Wine-Coopers* put into the Wine certain Things to hasten and help its *Clarification*, such as, being of gross and viscous Parts, may adhere to the floating *Lee*, and sinking, carry it with them to the Bottom; of which Sort are *Isinglass* and the *Whites* of *Eggs*; or such as meeting with the grosser and earthly Particles of the *Lee*, both dissociate and sink them by their Gravity; of which Kind are the Powders of *Alabaster*, *calcin'd Flints*, *white Marble*, *Rock-Alum*.

¶ The Clarification of *Ippocras* (hereafter Explain'd) is usually expedited by putting it into new *Milk*, which after a short Space of Time separates and sinks itself, carrying with it the Powders of the Spices and grosser Parts of the Wine, after the Manner of Things that clarify Liquors by way of *Adhesion*.

The *Grecians* at this Day, have a peculiar Way of spurring Nature, and causing her to mend her Pace, in fining and ripening their strongest and most generous Wines: And it is by adding to them, when they begin to work, a proportionate Quantity of *Sulphur* and *Alum*; not (as I think) to prevent their fuming up to the Head, and inebriating: For, notwithstanding this Mixture, they cause Drunkenness as soon, if not sooner than other Wines; nor are Men intoxicated by the Vapours of Wine flying up immediately from the Stomach into the Brain; but only to excite and promote their *Fermentation*, and hasten their *Clarification* ensuing thereupon; the *Sulphur* perhaps helping to attenuate and divide those gross and viscid Parts, wherewith *Greek* Wines abound; and the *Alum* conducing to the speedier Precipitation of them afterward. And it is reported, by those that have been among them, and have seen it done, that the Merchants put into every Pipe
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of their *Greek Wine*, a Gill, or thereabouts, of the Chymical Oil of Sulphur, in order to the longer Preservation of it clear and sound; which, though I easily believe, because the acid Spirit of *Sulphur* is known to resist Putrefaction in Liquors, yet I should decline the Use of Wines so preserved, unless in Time of *Pestilential Infection*.

But of all Ways of hastening the Clarification and Ripening of all Sorts of new Wine, none seems to me to be either more easy, or more innocent, than that borrowed from one of the Ancients, by the *Lord Chancellor Bacon*, which is, by putting the Wine into Vessels well stopped, and letting it down into the Sea.

But how shall we reconcile this Experiment to that common Practice of both the Ancients and Moderns, of keeping Wine in the Must a whole Year together, only by sinking the Cask for thirty or forty Days in a Well or deep River? That the Use hereof is very *ancient*,

is manifest from that Discourse from *Plutarch*, about the Efficacy of Cold upon Must, whereof he gives this Reason ; that Cold, not suffering the Must to ferment, by suppressing the activity of the Spirits therein contain'd, preserveth the Sweetness thereof a long time. Which is not improbable ; because Experience teacheth, that such who make their Vintage in a rainy Season, cannot get their Must to ferment well in a Vault, unless they cause great Fires to be made near the Casks ; the Rain mixed with the Must, together with the ambient Cold, impeding the Motion of Fermentation, which ariseth chiefly from Heat.

That the same is frequent at *this Day* also, may be collected from what *Mr. Boyle* hath been pleased to observe in his incomparable *History of Cold*, on the relation of a *Frenchman* : viz. That the Way to keep Wine long in the Must (in which State the Sweetness makes many to desire it) is to Tun it up immediately from the Press, and before it begins
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to work, to let down the Vessels, closely and firmly stopped, into a Well or deep River, there to remain for six or eight Weeks. During which Time, the Liquor will be so confirmed in its State of Crudity, as to retain the same, together with its Sweetness, for many Months after, without any sensible Fermentation.

But (as I said) how can these two so different Effects, the *Clarification of new Wine*, and the *Conservation of Wine in the Must*, be derived from one and the same Cause, the Cold of the Water? Without much Difficulty, as I conjecture: For, it seems not unreasonable, that the same Cold which hinders Must from fermenting, should yet accelerate and promote the Clarification of Wine after Fermentation: In the *first*, by giving check to the Spirit before it begins to move and act upon the crude Body of Liquor, so that it cannot in a long Time after recover Strength enough to work; in the *latter*, by keeping in the pure and genuine Spirit, otherwise apt to exhale, and rendring

rendring the flying Lee more prone to subside, and so making the Wine much sooner, clear, fine, and drinkable. Thus much concerning the *Helps* of New Wine.

For the *Preternatural* or sickly Com-motions incident to Wines after their first Clarification, and tending to their Impoverishment or Decay, the *general* and principal *Remedy* is *Racking*, that is, drawing them from their Lees into fresh Vessels. Which yet being sometimes insufficient to preserve them, *Vintners* find it necessary to pour into them a large Quantity of new *Milk*, as well to blunt the Sharpness of the sulphurous Parts now set afloat and exalted, as to precipitate them and other Impurities to the Bottom, by Adhesion. But taught by Experience, that by this Means the geuine Spirits of the Wine also are much flatted and impaired, (for the *Lee*, tho' it makes the Liquor turbid, doth yet keep the Wine in Heart, and conduce to its Duration,) therefore, lest such Wines should pall and die upon their Hands, as
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of Necessity they must, they draw them forth for Sale as fast as they can vend them.

For the same Disease they have divers other *Remedies*, particularly accommodated to the Nature of the Wine that needs them : For Instance,

For *Spanish* Wines disturbed by a *flying Lee*, they have this Receipt : Make a *Parel*, that is the Term they use, of the *Whites of Eggs*, *Bay-Salt*, *Milk*, and *Conduit Water* ; beat them well together in a convenient Vessel ; then pour them into a Pipe of Wine, (having first drawn out a Gallon or two, to make room) and blow off the Froth very clean. Hereby the Tumult will in two or three Days be recomposed, the Liquor refined, and the Wine drink pleasantly, but will not continue to do so long ; and therefore its best to rack it from the milky Bottom after a Week's Settlement, lest otherwise it should drink foul and change Colour. And thus,

IF

If your *Sacks* or *Canary Wines* chance to boil over, draw off four or five Gallons; then putting into the Wine two Gallons of *Milk*, from which the Cream hath been skim'd, beat them till they be thoroughly mix'd; adding a pennyworth of *Roch-Allum*, dried in a Fire-shovel beaten to Powder, and as much of *White Starch*: After this, take the Whites of eight or ten *Eggs*, a handful of *Bay-Salt*, and having beaten them together in a Tray, put them also into the Wine, filling up the Pipe again, and letting the Wine stand two or three Days; in which Time the Wine will recover to be fine and bright to the Eye, and quick to the Taste. But be sure ye draw it off that Bottom soon, and spend it as fast as you can.

For *Claret* in like manner distempered with a *flying Lee*, they have this Method;

Take two Pound of the Powder of Pebble-Stones bak'd in an Oven, the Whites of ten or twelve Eggs, a Hand-

Handful of Bay-Salt ; and having beaten them well together in two Gallons of the Wine, then mix them with that in the Cask ; and after two or three Days draw off the Wine from that Bottom.

The same Parel serves also for *White Wines* upon the Fret, by the Turbulency and Rising of their Lee.

To cure *Rhenish* of its Fretting, to which it is most prone a little after *Midsummer*, they seldom use any other Art, but giving it Vent, and covering the open Bung with a Tile or Slate ; from which they are careful to wipe off the Filth purged from the Wine by Exhalation : And after the Commotion is by this Means composed, and much of the fretting Matter cast forth, they take Care to let it remain quiet for a Fortnight or thereabouts, and then rack it into a fresh Cask, newly fumed with a sulphurate Match, called in Latin, *Tela Sulphurata* ; in High-Dutch, *Einschlag*.

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As for the various *Accidents* that frequently ensue and vitiate Wines after those forementioned Reboilings, please to remember, I refer them all to such as alter and deprave Wines, either in *Colour* or *Consistence*, or *Taste* or *Smell*. Now for each of these *Maladies* our *Vintners* are provided of a Cure. In particular,

To restore *Spanish* and *German* Wines, grown Yellow or Brownish, they add to them sometimes *Milk* alone, sometimes *Milk* and *Isinglass* well dissolv'd therein, sometimes *Milk* and *White Starch*; by which they force the exalted *Sulphur* to separate from the Liquor, and sink to the Bottom; so reducing the Wine to its former Clearness and Whiteness. The same Effect they produce with a Composition of *Fleur-de-Lis* Roots, and *Saltpetre*, of each four or five Ounces, the Whites of eight or ten *Eggs*, and a competent Quantity of common *Salt*, mix'd and beaten in the Wine.

To

To amend *Claret* decayed in Colour, first rack it upon a fresh Lee either of *Alicant* or *Red Bourdeaux* Wine; then take three Pound of *Turnsol*, steep it all Night in two or three Gallons of the same Wine; and having strained the Infusion through a Bag, pour the Tincture into the Hogshead, (sometimes they suffer it first to fine itself in a Rundlet) and then cover the Bung-hole with a Tile, and so let it stand for two or three Days; in which Time the Wine usually becomes well-coloured and bright.

Some use only the Tincture of *Turnsol*.

Others take half a Bushel of full-ripe *Elder-berries*, pick them from their Stalks, bruise them, and put the strain'd Juice into a Hogshead of discoloured *Claret*, and so make it drink brisk, and appear bright.

Others, if the *Claret* be otherwise found, and the Lee good, over-draw
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three or four Gallons, then replenish the Vessel with as much good *Red Wine*, and rowl him upon his Bed, leaving him reversed all Night: Next Morning turn him again, so as the Bung-hole may be uppermost, which stopp'd, they leave the Wine to fine. But in all these Cases, they observe to set such newly-recovered Wines abroach the very next Day after they are fined, and to draw them for Sale speedily.

To correct Wines faulty in *Consistence*, that is, such as are *lumpish*, *foul*, *ropy*, they generally make use of the Powders of burn'd *Allom*, *Lime*, *Chalk*, *Plaister*, *Spanish White-calcined Marble*, *Bay-Salt*, and other the like Bodies, which cause a Precipitation of the gross and viscid Parts of the Wine then afloat. For Example;

For the fining of *Spanish Wines* that are foul and lumpish, having rack'd them into a new-scented Cask, they make a *Parel* of burn'd *Allom*, *BaySalt*, and *Conduit Water*: Then they add thereto a Quart of
Bean-

Bean-Flower, or Powder of *Rice*, (and if the Wine be also brown and dusky, *Milk*, otherwise not;) and beating all these well together with the Wine, blow off the Froth, and cover the Bung with a clean Tile. Lastly, They again rack the Wine after a few Days, and put it into a Cask well scented.

Here, perhaps, some, not well understanding what is meant by this scenting of Casks, will pardon me, if I make a short Stand to explain it.

They take of *Brimstone* four Ounces, of burn'd *Allom* one Ounce, of *Aquavitæ* two Ounces; these they put together in an earthen Pan, or Pipkin, and hold them over a Chafing-dish of glowing Coals, till the *Brimstone* is melted, and runs; then they dip therein a little Piece of new *Canvas*, and instantly sprinkle thereon the Powders of *Nutmegs*, *Cloves*, *Coriander*, and *Annise* Seeds. This *Canvas* they fire, and let it burn out in the Bung-Hole, so as the Fume may

be received into the Vessel: And this is the best Scent for all Wines. Nor is it a modern Invention, both *Camerarius* and *Levinus Lemnius* taking Notice of the like Use among the *Antients*, of fuming their Casks with *Sulphur*.

To prevent the Foulness and Ropiness of Wines, the old *Romans* used to mix *Sea-Water* with the *Must*.

To cure the *Ropiness* of *Claret*, the Vintners, as well *French* as *English*, have many *Remedies*; among which, two or three are most memorable, and most usual.

One is this; *First*, They give the Wine a *Parel*, then draw it from the *Lee*, after the Clarification by that *Parel*: This done, they infuse two *Pound* of *Turnsol* in good *Sack* all Night, and the next Day putting the strain'd Infusion into a Hoghead of Wine with a Spring Funnel, leave it to fine, and after draw it for excellent Wine.

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The *Other*, is, They make a Lee of the Ashes of *Vine-Branches*, or of *Oaken Leaves*, and pour it into the Wine hot, and after stirring, leave it to settle. The Quantity, a Quart of Lee, to a Pipe of Wine.

A *Third* is only *Spirit of Wine*, which put into muddy Claret, serves to the refining it effectually and speedily ; the Proportion being a Pint of Spirit to a Hoghead. But this is not to be used in sharp and eager Wines.

When *White Wines* grow Foul and Tauny, they only rack them on a fresh Lee, and give them Time to fine.

For the mending Wines offending in *Taste*, *Vintners* have few other Correctives, but what conduce to *Clarification* ; Nor do they, indeed, need much Variety in the Case, seeing all Unfavourness of Wines whatever seems to proceed from their Impurities set afloat, and the Dominion

of either their sulphurous or saline Parts over the finer and sweeter ; which Causes are removed chiefly by *Precipitation* : For, all *Clarification* of Liquors may be referred to one of these three Causes ; (1.) *Separation* of the grosser Parts of the Liquor from the finer : (2.) The equal *Distribution* of the *Spirits* of the Liquor, which always rendereth Bodies clear and untroubled : (3.) The refining of the *Spirit* itself. And the two latter are the Consequences of the first, which is effected chiefly by *Precipitation* of the Instruments, whereof are *weight* and *Viscosity* of the Body admix'd, the one causing it to cleave to the gross Parts of the Liquor flying up and down in it, and the other sinking them to the Bottom. But this being more than Vintners commonly understand, they rest not in Clarification alone, having found out certain *Specificks*, as it were, to palliate the several Vices of Wines of all Sorts, which make them disgustful. Of these likewise I shall recite those of greatest Use and Esteem among them.

To

To correct *Rankness*, *Eagerness*, and *Pricking* of *Sacks*, and other sweet Wines, they take twenty or thirty of the whitest *Lime-Stones*, and slack them in a Gallon of the Wine; then they add more Wine, and stir them together in a Half-Tub with a *Parrelling-Staff*: Next they pour this Mixture into the Hogshead; and having again used the *Parrelling Instrument*, leave the Wine to settle, and then rack it. This Wine, I should guess to be no ill Drink for gross Bodies and rheumatick Brains, but hurtful to Good Fellows of hot and dry Constitutions, and meagre Habits.

Against the *Pricking* of *French Wines* they prescribe this easy and cheap Composition: Take of the Powder of *Flanders-Tile* one Pound, of *Rock-Allom* half a Pound; mix them and beat them well with a convenient Quantity of the Wine; then put them into the Hogshead, as the former.

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When their *Rhenish* Wines prick, they first rack them into a fine and strong scented Cask or Vat; then add to the Wine eight or ten Gallons of clarified *Hony*, with a Gallon or two of skimm'd *Milk*, and beating all together, leave them to settle.

Sometimes it happens, that *Claret* loseth much of its Briskness and Piquantness; and in such case they rack it upon a good Lee of *Red Wine*, and put it into a Gallon of the Juice of *Sloes* or *Bullice*, which, after a little Fermentation and Rest, makes the Wine drink brisk and rough. The like hath been sometimes done with *Virginia Pears*, call'd *Metaguesunaux*; which seems highly probable, because that Fruit is of Colour deeply sanguine, and very austere and rough of Taste, as I observed in some that were given me some Years since.

To meliorate the Taste of *Hungry*, and too eager *White Wines*, they draw

draw off three or four Gallons of the Wine, and infusing therein as many Pounds of *Malaga Raisins*, stoned and bruised in a Stone Mortar, till the Wine hath sufficiently imbibed their Sweetness and Tincture, (which it will do in a Day's time,) they run it through an *Ippocras* Bag; then put it into a fresh Cask well scented, together with the whole Remainder of the Wine in the Hogshead, and so leave it to fine.

To help *Stinking* Wines, the general Remedy is *Racking* them from their old and corrupt Lee. Besides which, some give them a fragrant Smell or *Flavour*, by hanging in them little Bags of Spices, such as *Ginger*, *Zedoary*, *Cloves*, *Cinnamon*, *Orras-Roots*, *Cubebs*, *Grains of Paradise*, *Spicknard*, &c. *Aromaticks*. Others boil some of the Spices in a Quart of good sound Wine of the same sort, and tun up the Decoction hot. Others correct all ill Savour of Rank-leed, *French* Wine with a few *Cinnamon* Canes hung in them. Others again for the
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the same End, use *Elder-Flowers*, and
Tops of *Lavender*.

Having thus run over three Parts of the *Vintner's Dispensatory*, and transcribed many of their principal *Secrets* for the Cure of the *Acute Diseases* of Wines, we are now arrived at the FOURTH, which contains Medicaments proper for their *Chronick Distempers*, viz. *Loss of Spirits*, and *Decay of Strength*.

Concerning these therefore, it is observable, that as when Wines are in preternatural Commotions, from an Excess and Predomination of their sulphurous Parts, the grand Medicine is to Rack them from their Lee; so, on the contrary, when they decline and tend toward *Palling*, by reason of the Scarcity of their Spirits and Sulphur, the most effectual Preservative is to rack them upon other Lees, richer and stronger than their own; that being from thence supply'd with new Spirits, they may acquire somewhat more of Vigour and Quickness. I say *Preservative*; because

because there is in Truth, no Restoring of Wines after they are perfectly Pall'd and Dead; for nothing that is past Perfection, and hath run its natural Race once, can receive any more than Amendment.

But besides reinforcing of impoverished Wines by new and more generous Lees, there are sundry Compositions, by which also, as by *Cordials*, the languishing Spirits of them may be sustained, and to some Degree recruited; of which the following are particular Examples.

When *Sacks* begin to languish, (which doth not often happen, especially in this *City*, where are so many Sack Drinkers,) they refresh them with a *Cordial Syrup* of most generous *Wine*, mix'd with *Sugar* and *Spices*.

For *Rhenish* and *White Wines*, a simple Decoction of *Raisins of the Sun*, and a strong-scented Cask, usually serve the Turn.

For *Claret* inclining to a *Consumption*, they prescribe a newer and richer *Lee*, and the Shavings of *Fir Wood*, that the Spirits being recruited by the additional *Lee*, may be kept from exhaling by the unctuous Substance of the *Turpentine*. Which Method they use at *Paris* with their delicate and thin-bodied Wines.

To give here a small Taste of the more disingenious Practice of *Vintners* in the *Sophistication* of Wines, which they call *Trickings* or *Compasings* ;

They transform poor *French White Wines* into *Rhenish* ; *Rhenish* into *Sack* ; the Lags of *Sacks* and *Malmfies* into *Muscadines* : They counterfeit *Raspick Wine* with *Fleur-de-lis* Roots ; *Verdea* with Decoctions of *Raisins* ; they sell decayed *Sherry* for *Lusenna Wine* : In all these *Impositions* deluding the *Palate* so neatly, that few are able to discern the *Fraud* ; and keeping the *Secret* so close, that fewer can come to the *Knowledge* of it.

As for their Metamorphosis of *White* into *Claret*, by dashing it with *Red*, nothing is more commonly either known or done.

For their Conversion of *White* into *Rhenish*, they have several Artifices to effect it, among which this is most usual.

They take a Hogshead of *Rochel*, or *Cogniack*, or *Nants White Wine*, rack it into a fresh Cask strongly scented; then give the white *Parel*: Put into it eight or ten Gallons of clarified Honey, or forty Pounds of coarse Sugar, and beating it well, leave it to clarify. To give this Mixture a good *Flavour*, they sometimes add a Decoction of *Clary Seeds*, or *Gallitricum*, of which Drugs there is an incredible Quantity used yearly to prepare *Rhenish Wines*. And this is that Drink wherewith our *English* are so much delighted, under the specious Name of *Rhenish*.

One Manner of making adulterate Wine is this;

Take four Gallons of *White Wine*, three Gallons of old *Canary*, five Pounds of *Bastard-Syrup*, beat them well together; put them into a clean Rundlet well scented, and give them Time to fine.

Sack is made of *Rhenish*, either by strong Decoctions of *Malaga Raisins*, or by a *Syrup* made with *Sack*, *Sugar*, and *Spices*.

Muscadine is fophifticated with the *Lags* of *Sack*, or *Malmsey* thus;

They dissolve in a convenient Quantity of *Rose-Water*, of *Musk* two Ounces; of *Calamus Aromaticus* powder'd one Ounce, of *Coriander Seed* beaten *half an Ounce*; and while this Infusion is yet warm, they put it into a Rundlet of old *Sack*, or *Malmsey*; and this they call a *Flavour for Muscadine*.

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Many other Ways there are of *adulterating* Wines, daily practis'd even in this our (otherwise well-govern'd) City ; but in respect they all tend to the abovementioned *Alterations*, and are less general , therefore I pass them.

Having thus given you some few Medicines, or rather Methods, now in Use, for the taking Care, or Curing of Wine, allow me to be more particular; and if to lay open the whole Art, and let you into the most certain exact Means for accomplishing these useful Ends, I am oblig'd to some few Repetitions, indulge me with them, that you may be made fully acquainted with every Way now in Vogue, both Abroad and at Home, for the right Management of all Sorts of Wines.

The Mystery of Wines consists in the making or meliorating of Natural Wines. Melioration is either of sound or vicious Wines. Sound Wines are better'd, 1. By Preserving. 2. By

timely Fining. 3. By mending Colour, Smell, or Taste.

To Preserve Wines, Care must be taken, that, after the Pressing, they may ferment well: For without good Fermentation, they become *qually* (i.e.) cloudy, thick, and dusky, and will never fine of Themselves, as other Wines do: And when they are fined by Art, they must be speedily spent, or else they will become *qually* again, and then by no Art recoverable.

The principal Impediments of the Fermentation of Wines, after pressing the Grapes, are either their Unripeness when gathered, or the Mixture of Rain-Water with them, as in wet Vintages; or else through the Addition of Water to rich Grapes. The *Spaniards*, we say, use *Gieffo* to help the Fermentation of their Canary Wines.

To preserve *Spanish* Wines, and chiefly Canary, and thereof principally that which is *Razy*, which will not keep so long, they make
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a Layer of Grapes and *Gieffo*, whereby it acquires a better Durance and Taste, and a whiter Colour, and becomes most pleasant.

French Wines are chiefly and commonly preserved by the *March*, as thus; Take Brimstone twenty or thirty Pounds, rack into it melted Spices, as Cloves, Cinnamon, Mace, Ginger, and Coriander Seeds; and some, to save Charges, use the Reliques of the *Ippocrass* Bag; and having mixed these well with the Brimstone, they draw through this Mixture, long square narrow Pieces of Canvas, which Pieces thus drawn through the said Mixture, they light and put into the Vessel at the Bung-Hole, and presently stop it close: Great Care is to be had in proportioning the Brimstone to the Quantity and Quality of the Wine, for too much makes it rough. This Smoking keeps the Wine long, white, and good, and gives it a pleasant Taste.

There's another Way for *French*. and *Rhenish* Wines, *viz.* *Firing* it. 'Tis done in a Stove ; or else a good Fire made round about the Vessel, which will gape wide, yet the Vine runs not out ; 'twill boil, and afterwards may soon be rack'd.

Secondly, For timely fining of Wines : All Wines in the Must are more opacous and Cloudy. Good Wine soon fines, and the gross Lees settle quickly, and also the flying Lee in Time. When the grosser Lees are settled, they draw off the Wine, which, as is said above, they call *Racking*.

The Practice of the *Dutch* and *English*, to rid the Wine of the flying Lees speedily, and serves most for *French*, *Spanish*, and *Portugal* Wine, is thus performed : Take of Iling-lafs half a Pound, stop it in half a Pint of the hardest Wine of the Sort that that can be got, so that the Wine may fully cover it. Let them then stand twenty-four Hours ; then pull

pull and beat the Isinglass to Pieces, and add more Wine, and four times a Day squeeze it to a Jelly, and as it thickens add more Wine. When 'tis fully and perfectly jellied, take a Pint or a Quart to a Hogshead, and so proportionably; then overdraw three or four Gallons of that Wine you intend to fine, which mix well with the said Quantity of Jelly; then put this Mixture to the Piece of Wine, and beat it with a Staff, and fill it top-full. *Note*, that *French Wines* must be bunged up very close; but not the *Spanish* or *Portugal*; and that Isinglass raiseth the Lees to the Top of strong Wines, but in weaker precipitateth it to the Bottom.

They mend the Colour of sound Clarets, by adding thereto Red Wine, Tent, or Alicant, or by an Infusion of Turnsol, made in two or three Gallons of Wine; and then putting it into the Vessel, to be then (being well stopp'd) rolled for a quarter of an Hour. This Infusion is sometimes twice or thrice repeated, according

according as more Colour is to be added to the Wine; three Hours Infusion of the Turnsol is sufficient, but then it must be rubbed and wringed. Turnsol is an Herb too well known to want Explanation.

Claret over-red, is mended with the Addition of White Wines.

White Wines coming over Sound but Brown, thus remedied; Take of Alabaſter Powder, over-draw the Hogſhead three or four Gallons; then put this Powder into the Bung, and ſtir and beat it with a Staff, and fill it Top-full. The more the Wine is ſtirred, the finer it will come upon the Lee, that is, the finer it will be.

To colour Sack white, take of white Starch two Pound, Milk two Gallons, boil them together two Hours; when cold, beat them well with a Handful of white Salt, and then put them into a clean and ſweet Butt, beating them with a Staff, and the Wine will be pure and White.

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One Pound of the aforementioned Jelly of Isinglass takes away the Brownness of the *French, Spanish,* and *Portugal* Wines, mix'd with two or three Gallons of Wine, according as 'tis Brown and Strong, more or less to be used: Then overdraw the Piece of Wine about eight Gallons, and use the Rod, and then fill the Vessel full; and in a Day or two 'twill fine, and be white, and mend if qually.

The first Buds of *Ribes Nigra* infused in Wines, especially *Rhenish*, makes it Diuretick, and more fragrant in Smell and Taste; and so doth Clary. The Inconvenience is, that the Wine becomes more heady; a Remedy whereof is Elder-Flowers added to the Clary; which also betters the Fragrancy thereof, as 'tis manifest in Elder Vinegar. But these Flowers are apt to make the Wine ropy.

To help Brown Malaga's, and *Spanish* and *Portugal* Wines, Take Powder
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of Orras-Roots and Salt-Petre, of each four Ounces, the Whites of eight Eggs, whereunto add as much Salt as will make a Brine; put this Mixture into the Wine, and mix them with a Staff.

To meliorate Muddy and Tauny Claret, take of Rain-Water two Pints, Yolks of eight Eggs, Salt a Handful, beat them well, let them stand six Hours before you put them into the Cask, then use the Rod, and in three Days it will come to itself.

To amend the Smell and Taste of Malaga, take of the best Almonds four Pounds, make therewith, and with a sufficient Quantity of the Wine to be cured, an Emulsion; then take the Whites and Yolks of twelve Eggs beat them together with Salt an Handful, put them into the Pipe, using the Rod.

To amend the Smell and Taste of *French* and *Rhenish* which are foul, take, to a Auln of the Wine, of
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Hony one Pound, of Elder-Flowers a Handful, of Orras-Powder an Ounce, one Nutmeg, a few Cloves; boil them in a sufficient Quantity of the Wine to be cured, to the Consumption of half; when 'tis cold, strain and use it with the Rod: Some add a little Salt. If the Wine be sweet enough, add of Spirits of Wine one Pound to a Hoghead, and give the Cask a strong Scent. Spirit of Wine makes any Wine brisk, and fines it without the former Mixture.

A Lee of the Ashes of Vine-Bran-ches, viz. a Quart to a Pipe, being beaten into the Wine, cures the Ropiness of it; and so infallibly doth a Lee of Oaken Ashes. For *Spanish* or *Portugal* ropy Wine, rack it from its Lees into a new-scented Cask, then take of Allom one Pound, Orras-Roots powdered half a Pound; beat them well into the Wine with a Staff. Some add fine and well-dy'd Sand put warm into Wine. If the Wine besides proves Brown, add six Quarts of Milk to a Pipe. The
Spaen

Spaen cures ropy Wine, used before it begins to Fret.

Herring-Roes preserve any Stum Wines.

To order Rhenish Wine when Fretting: Commonly in *June* that Wine begins to fret and grow sick, then have a special Care not to disturb it, either by removing, filling the Vessel, or giving it Vent, only open the Bung, which cover with a Slate, and as often as the Slate is foul cleanse it, and the Bung from their Filth; and when the Fermentation is past, which you shall know by applying your Ear to the Vessel; then give it Rest ten or twelve Days, that the grosser Lees may settle; then rack it into a fresh scented Cask.

This Mixture meliorates vitious Wines both in Smell and Taste, especially *French*: Take of the best Honey one Part, of Rain-water two Parts, and one third of sound old Wine of the same Kind; boil them
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on a gentle Fire, to a third Part, scumming them often with a clean Scummer, (to which Purpose they have a Pall of fair Water standing by to rince it in;) then put this Mixture hot into a Vessel of fit Capacity, and let it stand unbunged till cool. Some, to better this, put in a Bag of Spices. This Mixture will serve also to fine any Wine new or old. 'Twill mend the hard Taste of Wine, that is, putting a Gallon thereof into a Hoghead, and using the Rod,; and then let it rest five or six Days at least; but if mild enough, add white Mustard-Seed bruised.

To mend or preserve the Colour of Clarets, Take red Beet-Roots a sufficient Quantity, scrape them clean, and cut them into small Pieces; then boil them in a sufficient Quantity of the same Wine, to the Consumption of a third Part; scum it well, and when cool decant off what is clear, and use the Rod.

The following Prescription is equally good with the last mention'd, and is commonly used; Take of the Wine one Quart, and of Honey two Pounds, with two Quarts of Rain-Water very clear, twelve Beet-Roots of moderate Sizes, and about four or five Handfuls of ripe Mulberries; let them be thorow ripe; put these together in a clean Vessel, over a moderate Fire, and boil the Whole to almost half the Quantity first set on; then let it stand to be cold before you pour it off; it will be sufficient to decant it as soon as you can without straining; when you put it into the Cask, be sure it is quite cold; use the Rod, and stir it heartily about.

The best Method to preserve *French* Claret that's already racked from its Lees, so as to keep it right and good, is by the never-failing Method of putting to every Tierce of Claret ten Eggs; you need do no more than make a small Hole in the Top of each Shell; put them into
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the Wine, stop the Bung down again very close, and in a few Days the Wine will consume the Eggs, Shells and all : This is a Preservative almost universally known and practis'd.

If you are apprehensive that your *French Wines* are inclining to Soure, take them in Time, and the following Ingredients will prevent their growing worse, or restore them if already touch'd ; and either of the two I shall mention under this Head, will answer the same End : Some use the Grains of Paradise, which, when beat in a Pan, they either put loose into the Cask of Wine, or tie up in a Bag, and by a String fasten'd at the Bung, the Bag hangs at about the Center or middle of the Wine. Others use Lavender-Tops, which they put in or hang ty'd together, as before said, only without a Bag : Remember, which soever of these you chuse, to stop the Wine again very close ; and in these the Judgment of those concerned must be their Guide ; as to the Quantity of Paradise

F 2 Grains

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Grains, or Lavender-Tops, more or less being necessary, according to the Degree of Tartness that has seiz'd the Wines; a small Matter would be properest to put into the Cask at first; then after a few Days, 'twill be necessary to examine what Effect it has had; and according as that answers, to add more, or hold your Hand.

The Prescriptions above are to be apply'd when your French Wines are inclining to be Soure; but if their Condition be past this, and they are already too bad to be restored by the foregoing Medicines, and having try'd them, found they don't answer your Expectation, then take four Ounces of the largest best Wheat, full-grown and ripe, boil this in a Quantity of fine clear Water sufficient to boil it in; let not your Fire be too fierce, and see that 'tis all burst with boiling before you take it off; let it stand till perfectly Cold; then sewing it up in a Bag, put it into the Vat, and stir it very well with the Staff, and be sure to bung up the
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the Wine very close. And now in a few Days more make a second Trial; and if you still perceive Sourness remaining, take five or six Sticks of good Cinnamon, split them once, so that you may clear the Inside, as well as the Outsides from Dust, and putting them into your Cask, stop it up as before. If also these do not produce a very considerable Change, tho' not a perfect Cure, try a little Salt of *Tartar*, as mentioned hereafter. And if all together won't answer, the Wine must be bad in its own Nature, or so adulterated, or so far gone by being neglected, as to be past all Possibility of a Recovery.

But other Means must be used with *Spanish* and *Portugal* Wines in their Tendency to become Soure: The best for them, is to rack the Wine into a clean right-scented Cask, till 'tis within two or three Gallons of being full, which make up with fair Water; then put in four Ounces of burn'd Chalk; the Chalk I look upon to be best, though there are some use clean Lime, when made into a

Plaister; and where the former is not to be got, the latter may be try'd; but 'tis certain that Chalk is seldom known to fail: If the first time does not answer, in three or four Days, rack it again, and fill up what is wanting in the Cask, with clear rain Water; take particular Care of the bunging it up: If the Wine upon this should prove too Bitter, as is commonly the Case, you may correct that Fault with Nutmegs and Cloves, putting in a Quantity according to the Degree of Bitterness received, and upon Examination add more if requisite. Don't pound the Nutmegs or Cloves, 'tis apt to make the Wine Thick. These Remedies, with all we have already mentioned, or shall hereafter mention, are equally applicable to Reds and Whites of the same Species of Wine, unless particularly specified to the contrary.

Wines of all sorts do often become ill-favour'd, or, in short, stinking; and sometimes this may be amended by putting a few Nutmegs and Cloves into them,

them, which will not only remove the Malady, but give them a Pleasantness and Flavour they had not at first ; but if these fail, take half an Ounce of Ginger, and two Drams of Zedoary, which powder and boil in two Quarts of the same Sort of Wine that is very good, and when 'tis boiling hot, put it all together unstrained into the Vat, which stop very close, and let it lie undisturb'd for at least fourteen Days.

Sometimes the ill-favour of Wine proceeds from the Foulness and Corruption of its Lees, which may be amended by any of the following Ways ; First, rack it into a clean good-scented Cask, and if it be Red or Claret, give it a fresh Lee of the same Sort, but if any sort of White, not ; then take of Cloves, Ginger, and Cinnamon two Ounces each, and four Ounces of Orras-Root, powder them, but not too fine ; it may more properly be said, bruise them in a Mortar : Put these in a Bag, and hang them into the Wine ; taste it once every three Days, and when
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'tis cur'd, take the Bag out and stop the Cask close. If this should not perfect the Cure, after you have racked the Wine from its foul Lee, and given it a fresh one, take half a Pound of Cloves, of Mastick, Ginger, Cubebs, of each two Ounces, half a Pound of Orras-Root, and three Drams of *Spica Nardi*, make of these a very fine Powder, and putting it loose into the Wine stir it heartily with a Staff; after which make a good Fire before the Cask, and keep the Vault warmer than usual, 'till you find it has had the desired Effect.

Foreigners perform this Warming or Firing of their Wines, as 'tis more properly called, in a Method something different to ours; in some of their Vaults they have three or four Stoves, or more, according to the Bigness of the Vault; and in these they make very large and very hot Fires: Others place a hot Stove before every Cask with a moderate Fire in it, which equally answers Expectation; for by these Means the Must ferments with that extraordinary Vehemency

mency that the Wine will work out between the Staves: When you perceive the Wines to be wrought up to this Ferment, add no more Fuel to the Stoves, but let the Fire die away of course, and let the Wine stand some few Days after this great Ebullition and Working ceaseth; then carefully rack it off into a clean well-scented Cask, stop it close down, and let it stand for Use. This firing of Wines is very seldom necessary, but when the Season proves very Cold, and the Wines of course fall out Green; and in these Cases, it proves of excellent Use.

To be a little fuller in my Account of what Stum is, that none may mistake what is so absolutely necessary to be understood, the clearest Notion I can convey of it take thus: 'Tis pure Wines kept from Fretting, by often racking and matching it in clean Vessels, and those very strongly scented, or, which is the same, match'd over and over again. By these Means it becomes clear and bright, or rather more so than any other

ther Wine ; and thereby 'tis also able to preserve itself from both its Lees, by Precipitation of them, or forcing them to subside : If this Racking and Matching is neglected, the Stum will often become drinkable Wine, which in effect destroys it, changing its Nature so much from what it was before, that it no longer can be apply'd as Stum : The Bung of the Vessel you keep your Stun in, must be always most closely stopp'd, and the Vessel itself very tight, and hooped with Iron at least, or it will be in great danger of Bursting. Stum is often put to decaying Wines to make them ferment afresh, which it will perform, and not only give them new Life, but Sweetness too ; but Stum thus apply'd to Wines is often of dangerous Consequences ; it may indeed answer the Vintner's End, he may get his Wines off by it, and please at the same time is Customers Palates, but they seldom fail offending the Stomach, lying in the Head, and making that lumpish and heavy next Day, causing Loosenesses and the Cholick ; and very often they

they have occasioned Miscarriages in Women, though they have drank but a moderate Quantity of them.

As Persons may sometimes be under a Necessity of fining their Wines immediately, in order for drawing them, it cannot fail being a very acceptable Piece of Knowledge to those, to be made acquainted how even this is to be done. There are two Ways for effecting this valuable Work : The one is easy, but not so safe; the other something more difficult, but if hit right, as with Care it may be, is much preferable to the other : A Quart of Vinegar will in three Days Time, fine a Hog-head of any sort of Wine; but this I say, is not so safe; for, unless you are sure of a very quick Draught, you may too soon be made sensible of the Disadvantage the Vinegar may prove to the Wine : The better Method therefore is, to fill a Cask with Shavings or Chips of Beech or Oak, either of them will do, but take Care they are Sound, neither decay'd or Worm-eaten : Here lies the Difficulty
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I mention'd ; let your Choice be with Judgment, or you'll spoil all : If it hits right, the Wine will keep its Goodness and Brightness as long as is needful. Put these Chips or Shavings loosely into a Cask till 'tis full ; the Cask may be bigger or lesser, according to the Quantity of Wine you have a mind to fine ; then pour in your Wine till the Cask is quite full, and in twenty-four Hours Time it will be bright, and fit for Use. This will do for any sort of Wine whatever.

I pass next to a prevailing Malady in old Wines ; their Loss of Taste, their being Dull and Deadish : These are Accidents to which they are much subject, and which with no small Difficulty, sometimes, they are to be recovered from : That which has hitherto been found to answer better in these Cases, has been to cause a new Fermentation : The Means of which has been universally agreed upon, though the Time when to apply these Means has caused some Dispute. But to enter upon the Remedy,

medy, Take two Gallons of Stum to a Hoghead, make this very hot, and put it so into the Wine; then place a Stove with a good Fire before the Cask, which will cause a Fermentation, that will continue till all the Sweetness of the Stum is communicated to the Wine, which thereby is rendered Brisk and Pleasant; but if upon the Fermentation's ceasing these good Effects should not be produced, you must add more hot Stum, and blow up your Fire again 'till they are; for 'tis found by Experience, that two Gallons of Stum to a Hoghead will not always answer Expectation; you must therefore add more Stum, and continue your Fire longer, according to the Degree of Dulness or Deadness that has seiz'd your Wines; and don't be discouraged at your first Disappointment, for you may depend upon it the Medicine will answer at length, if the Distemper be no worse than above set down. The Time for making this Application, I say, is a Matter in Dispute; there are some take their Directions

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from the Wine itself, and whenever they discover its Infirmities, endeavour to help it; and in doing so, they are not altogether baulk'd; but the Kinder and the more Natural Time seems to be in *August*, which being the Time of Vintage, all Wines have more or less a Disposition to ferment of themselves; and 'tis very certain, that less Stum, and less Fire will do at this Season than at any other, and also more fully produce the desired Effects.

No little Caution ought to be used in the racking of Wine: The best time is observed to be in the Decrease of the Moon, when the Wine is wholly free from Fretting; when the Wind is at the North-East, or North-West, not full North, East, or West, nor in the least inclining to any Southern Point; when there is a clear serene Sky, and free from Thunder and Lightning. This Observation should be strictly adhered to; for you may depend upon it, if you perform your Rackings when the Weather is not thus settled, and fair, your Wines will never prove
or

or keep so fine and bright as they would otherwise have done.

I shall here set down another very good Match for *French, Spanish, Portugal*, and all Sorts of Wines. What a Match is, has before been explain'd : Take two Ounces of Cloves, of Orras-Roots, Mastich, and Brimstone, four Ounces each ; Ordering it as before in matching Wines.

Instead of four Ounces of Mastick, for *Spanish* Wine, you must use eight : The former Part of this Prescription will do for all other Sorts of Wines, only adding a small Quantity of Nutmegs, Ginger, Cinnamon, and Cloves, according as you find it may be necessary to correct any Bitterness, or disagreeable Taste the Wine may have contracted from the former Ingredients.

It often happens that *Malaga* Wines will not become fine upon your first Application ; nor with the Methods commonly made use of to force them : 'Tis best to try the ordinary Way first ; but
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if that fails, the following will make you full Amends for all your Charge and Trouble, it never having been known to do otherwise, unless the Wine itself has been originally Defective : But to proceed, upon a Supposition of its being good in Kind, Take at least two Pounds of crude Tartar to a Pipe, dry it, powder and sift it very fine; then mix it with the Whites of six Eggs; reduce this Composition also to a Powder by drying it, and once more sift it very fine; then draw about two or three Gallons out of the Pipe, and mix the Powder well with that Quantity before you return it : Put the Whole into the Cask; which being quite full, work it heartily about with a Staff, as has been often mentioned; then stop it down very close, and in ten or twelve Days Time at most, the Wine will be fine and fit for Use : If upon Trial it should prove otherwise, let it only stand Quiet for four or five Days longer, and you may be sure of not being disappointed, the Weather itself, at some Seasons, occasioning this Difference.

That

That which fines *French* Wines most speedily, and perhaps best of any Method yet mention'd, is the following, and which, upon all sudden Occasions, is always us'd by those that know it: They hang a Piece of Scent, as before described, in a Cask of Wine, which when the Wine has burn'd up, as they call it, or drawn the Savour out of it, as it will soon do, they put in a Pint of the best Spirit of Wine, and stir it about with a Staff till it is thoroughly diffused through the whole Mass of Wine: If your Wine is very foul, add a small Quantity of Salt very well dry'd, then be careful in Bunging of it up; let it stand undisturbed, and in about four and twenty Hours the Wine will be fine and fit for Use.

The preserving your Must, in order to have it ready upon all Emergencies, being of the utmost Consequence to those who have the Charge of Wines, I have set down every particular Method in Use for keep-

ing it good from Year to Year ; Take a new tight Cask well scented, and Pitch it well within and without ; let the Pitch be fully dry before you put in the Must ; then be sure not to fill it above half full ; stop the Bung as close as possible ; and to prevent all Intercourse of Air as much as may be, cover the Bung thick with Mortar ; Mortar, in this particular Case, being preferable to any Thing else : Or, if you like it better, sew the Cask thus prepared and thus filled, into a Skin of any Sort, and sink it for about thirty Days into a Well or River : These two Methods are most in Vogue. There are two other which are sometimes used, but don't seem to meet with so general an Acceptance. Some content themselves with putting a Piece of *Polium Montanum* into the Vessel, which hangs about the middle of the Must by a String from the Bung : Others only rub the Inside of the Vessel with Cheese ; either of which, they assure us, will equally preserve Must good for a whole Year with the two former.

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'Tis at present the prevailing Custom, to put Alom into a Hog's Bladder, and throw it into a Cask of any Sort of Wine to prevent its Discolouring, or turning Flat and faint, even before it shews any Inclination to do so; and if your Hogthead or Pipe of Wine is likely to be any considerable Time drawing off, this Preservative should not be omitted; for it will wonderfully contribute to prevent any or all of the Illnesses above specified: If these Distempers you should find accompanied with Ropiness, which is often the Case, Whites of Eggs, prepar'd as has been before set forth, will effectually cure it, only remembering to proportion the Number of your Eggs to the Quantity of your Wine, and the Degree of its Disease.

Flatness is a Distemper Wines are more subject to, perhaps, than any other; andtho' its less hurtful, 'tis more disagreeable than most other Distempers of Wines; Care should therefore be taken, especially by those whose
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Interest 'tis to recommend their Wines, to apply in time a suitable Relief. The best Sort of Spirit of Wine will sometimes raise them, when the Flatness is not too great; but a more certain Remedy is to put into your Wines a small Quantity of Raisins and Sugar, or Raisins and Molosses, still proportioning the Medicine to the Degree of the Malady, and the Body of the Wine, as every one's Judgment may easily be supposed to direct. This will do for any Sort of Wines, except Sack, which is soonest and best recovered from its Flatness by racking and putting it upon fresh Lees; a Method never heard to fail with Sack.

Our Wine-Coopers and Vintners, have for many Years past, put great Quantities of Sugar and Molosses into all Sorts of their Wines, to render them brisk and sparkling, and to make them strong and heady, as well as to mend some of their ill Tastes; and to this Practice they have been necessitated by two Reasons, first, to procure Vent for
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their bad Wines, and in the next Place to gratify the Humours of those ignorant Country People, who not being used to the drinking of Wine, and therefore not proper Judges of it, think their Money thrown away, and the Wine not good, if a Pint a-piece is not enough to intoxicate and make them drunk; so that when they imagine they are drinking of Wine, perhaps a third Part of what they pour down is a fiery *English* Spirit, so bad they would not taste it by it self; and this instead of refreshing them, and reviving their Spirits, as wholesome Wine would do, enflames and weakens them, impairs their Healths, and at length destroys their Constitutions. Now if these Brewers of Wine would go to the Expence of it, all these hurtful Consequences might be prevented, and yet the Wines made to drink as brisk, pleasant, and sparkling, and be as strong as they could be rendered by the Mixtures above; for Raisins, Cuts, and Stum, will fully answer the End, and the Wine will be so far from becoming worse,
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from having any of these applied to it, that by the right Use, as has been set down in the several foregoing Receipts, the Wine becomes much better than it was at first, and will conduce more to the Preservation than Destruction of those that drink it; what Cate is will immediately be shewn.

Country Vintners have a Way, pretty peculiar to them, which is feeding their fretting Wines with raw Beef, tho' this is not wholly confin'd to them neither, it being now and then practis'd in Town; this often proves very beneficial to the Wines; and however the Knowledge of it may cause a Disrelish, 'tis certainly not bad for the Drinker. Wine-Coopers and Vintners in both Town and Country, feed their Canaries with *Malaga*, which they add, more or less, to all Canaries, according as the latter may stand in need of the Supply.

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But in *London*, and in great Towns where Vintners have large Vaults or Cellars of Wine to have Recourse to, they have, besides many other Advantages, a particular one over the inferior Retailers of Wine; the former are capable to correct many Faults in Wine, at the very Instant of drawing it, and thereby suiting it to the Palate of the Person they draw it for; and they are of late Years grown so very famous for this, especially in *London*, that let a Pipe of Wine prove never so bad, they need be under no Fear of getting rid of it; for if they don't use it at the Beginning of the Year, when they make up their Wines for the Summer's Draught, they can hand it out by Retail with better Wine; and 'tis no new Thing with them to draw a single Pint of Wine from two, three, sometimes four or five Casks, either to hit the Taste of those who are to drink it, or else to palliate, and pass off some of this very bad Wine; and this dashing of Wine, as they term it, is so very various, that it would be endless to en-

ter here into the tracing them thro' the almost infinite Methods of it; some of them are both good and agreeable, tho' most of them are pernicious, and should, if possible, be prevented; they are all of them foreign to this Undertaking, and if treated of, should be in a separate Performance, which could not be a very small one, if they were to be fully enumerated and rightly discuss'd; every Day almost adds to their Number, according as the Vintner or his Customer is in Humour; for that which pleases one Night, may not do so the next, no, not even the same Man: This is no Hardship upon one that understands Business, for he can vary his Hand below Stairs, with as much Variety as the most whimsical Fancies above Stairs can desire it.

I am obliged here to explain what is all along meant in the foregoing Treatise by *Ippocras*, which, when that is understood, 'twill easily be known, that the Bag into which it
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is put, and through which it distils and fines, is called the *Ippocras Bag*.

The best Sort of *Ippocras*, is made by taking of Cardamums and Carobalfamus, of each half an Ounce; Coriander-Seed prepared, Nutmegs and Ginger, of each two Ounces; Cloves two Drams; bruize and infuse them forty eight Hours in two Gallons of stony White Wine, often stirring them; after which, add about three Pints of Milk: Immediately after, strain the Whole through a Flannel Bag, and sweeten the Composition with a Pound of Sugar-Candy.

Muscadine or Sweets, is a Compound, as we have mention'd often, very useful; and is made in one of the Methods following: Take thirty Gallons of Crete, which is White Wine boil'd till half the Quantity you first put on the Fire, is consumed, and put that to a But of Wine; which makes excellent Muscadine, if rightly managed: Or the Lees and Droppings of Wine boil'd and
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clarify'd; to which, add a Flavour, by Coriander Seeds prepar'd, and Shavings of *Cyprus* Wood, and your Muscadine will be good. Some instead of *Cute*, make it with Sugar, Molasses, and Honey, which answer very well.

To conclude with a most curious Sweet, which has been but very lately discovered; and which is of so beneficial a Nature, that not any one Medicine was ever found to effect a Cure in so many different Kinds of Liquors as this has done. 'Tis accordingly apply'd to all Sorts of Wines, Cyder, Beer, or Ale, and is seldom or never known to fail; perfectly restoring them when either pall'd, prick'd, or soure; immediately rendering them brisk, palatable, bright, and good. All these are effected by *Salt of Tartar* only, but such as is rightly and chymically prepared: Of this a small Quantity does, about an Ounce being sufficient to an Hog-head of any of the Liquors I have before mentioned. The Liquor thus restored, may be drank with the utmost

most Safety, this Ingredient being most wholesome, and no Way capable of injuring any Person, that is in a Condition to drink of any of those Liquors.

Thus I have run thro' whatever is worthy to be known in the Management of Wines. There are several Methods to adulterate and spoil them, which I could have given; but that being a Knowledge, there are already too many Proficients in, and such as is very destructive in its own Nature, I have purposely omitted them. My Design has been to make Wines better, not to spoil them; to put it into the Power of all that have the Care of Wines, in either a publick or private Capacity, to preserve and cure them themselves, that they may not be imposed on by the Designing or Ignorant; one or other of which has render'd it very difficult, if not almost impracticable, for any private Gentleman to have a tolerable Quantity of good Wine in his Vaults, unless purchas'd at a very extravagant Price.

Some

Some of the Receipts inserted in this Treatise may at first View, seem the same, but upon Examination, they will be found otherwise; and as I hinted before, that I might be full in the Relation, I have set down the several different Compositions used for Cure, that if (as it may happen from the Degree of the Distemper, the Situation of the Wines, or the Season in which they are ailing) one Remedy may not prove sufficient, another may.

Having nothing to add, but what would be look'd upon as Trifles, and rather Matters of Amusement, than instructive, I ought not to give them a Place among such beneficial and useful Prescriptions as are laid down in the foregoing Treatise, in which every Thing will be found that is worthy knowing, or ought to be put in Practice in the Management of Wines.

FINIS.



51530
In Vino Veritas:

OR, A

266. 12
5-
CONFERENCE

BETWIXT

Chip the Cooper,

AND

Dash the Drawer,

(Being both Boozy)

Discovering some Secrets in the
Wine-brewing Trade.

Useful for all sorts of People to save
their Money, and preserve their Health.

L O N D O N,

Printed for J. Natt. near Stationers-Hall, 1698.



(1)

In Vino Veritas :
OR, A
CONFERENCE, &c.

Chip. **W**ELL met, my Dear
Brother of the Spig-
got, how goes the
Wine-Trade ?

Dash. Why, faith but very indiffe-
rently !

Chip. How so ?

Dash. To be frank with you my
Friend, The Times are dull, the Town
is empty, the Folks Cole is low, the late
damn'd long knocking War has drain'd
us, the Trade with *France* unsettled,
the price of good Wines excessive, and
which adds a huge weight to their Mis-
fortunes, this very *Vintage* (as well as

the late for several years together) has miscarry'd.

Chip. This is doleful news, dear *Dash*!

Dash. Ah so it is, it makes our brethren very melancholy, when they reflect on't.

Chip. Puh! tho matters at present have a malignant Aspect, they may mend, Boy, especially being, as you seem to intimate, at the worst; but pray Mr *Diogenes* (for tho you don't live in, yet you live at the *Tub*) expatiate a little, and explain your self a little also.

Dash. I vow to *Jove*, I think *Dame Nature* is disjoynted, unhing'd, untwisted, or inverted; for not only old *England* has fail'd in her Trumpery of Fruit, but the Noble Continents of *France*, *Portugal*, *Spain* and *Italy*, (those rich Soils and warm Climes, productive of that blessed juice of the Grape) have mist also.

Chip. Pray how comes all this to pass?

Dash. I am no *Astronomer* nor *Astrologer*, I understand neither the Motions nor Language of the Stars; nor do

(3)

I think with the Famous *Flam*—— of *Greenwich*, that the *Crust* so lately discover'd about the Sun (by his penetrating eyes, and no body's else) has been the Cause of these late Cold, Moist, and (in a word) Unseasonable Summers, no more than of the Vast Snows some Travellers tell us have (not long since) fallen in *Africa*!

Chip. Well! pray proceed; I did well to dub you a Philosopher, for I find you are so really, tho you silyly pretend the contrary; sure I am the Philosophy of the Bottle is the pleasantest, tho not the deepest in the World. However, tho the Cause of these Uncouth Seasons; these Winters for Summers, Autumns for Springs, may to us (sorry Scoundrels) be unintelligible, yet certain it is, no effect (here below) tho never so minute, but has its proper and natural cause.

Dash. You are most infallibly in the Right, but the greatest difficulty lies in discoverng the true and genuine cause, which being far above my reach, I shall leave to the more curious and learned to inform the World; but this is true in Fact, and observed by every common Eye,

Eye, and is in every bodies mouth, that the Seasons are not so kindly and natural as they have been in times past, and that within these few years.

Chip. What you assert is true is beyond all denial.

Dash. Ay it is, to our grief! and all the Remedy we poor miserable Mortals have, is to wait with patience the return of the year, when perhaps the *Solar-Crust* may be worn off, and *Phebus* recover his wonted warmth, and once more generously gratify the World with his Glorious beams, and benign influences.

Chip. The Succeeding Summers may prove hotter, and so make us some kind of amends. But, to comfort thy drooping Spirits dear Dab, I can tell thee, the Merchants in Town, say that some particular Vineyards (in the Kingdoms and Countries lately mentioned) have hit pretty well.

Dash. So then we shall have good Bubb, tho it may perhaps be a little the dearer to us, for we can never pretend to advance the publick prizes in our Houses any higher, at this time of day, our Customers think eighteen pence dear enough.

Chip.

(5)
Chip. But then good Mr. Rumbopper, we can bring the Wine down to such a price as we can afford it for, and live, nay, and get good pretty Estates, as you know several of our Tribe have, for to our glory be it spoke ! one of our Fraternity was called upon to be one of the She--ffs of London this very year, which looks well still.

Dash. Ay Boy so it do's, we have several fat fellows, who tho they wear blue Aprons, can number their pence to the tune of ten thousand Pounds. And all this got by the Sins of the People. But to the Text, how the Devil can you reduce the Wine to the present price ? Or as you said just now to any price.

Chip. Oh well enough I warrant you, tho you are a Novice at the Sport, I and the rest of the Gimbleteers know how to conjure in dark Vaults, and to jumble the tipples together, dash it dam-nably, and yet make it palatable, and pass for as good Wine as any in Town. The late plaguy War made us bestir our stumps, and bethink our selves how to brew more, and more dextrously than ever ; for you may remember all Trade
with

with *France* was prohibited, so that all the lean hungry thin Wines we us'd to fetch from thence, and mend with *Ports*, were entirely kept from us; besides you can't forget a Law, to oblige the Vintners to sell the Noble Juice for six pence, which stood them in seven or eight pence the Quart, and carry'd it so far, that they were upon a Penalty forc'd to draw all in full Pewter measure, which fell in heavily upon them, who had been us'd to draw in pint and quarter, or at most) half bottles. Nay, it startled 'em for a time, but they soon recovered their small senses, and evaded the Act, baffled the Informers, and by the help of their *Coopers* brew'd but so much the more. For alas! their Wear and Tear is great, the Rents of their Houses high, charge of House-keeping heavy, and other burthens very grievous to be born.

Dash. Thou sayest well *Chip*, I find thou art an understanding Fellow at business.

Chip. Else what should I be good for, for I am hardly fit for any thing else, but e'en just what I was dragg'd up to, no more than you.

Dash.

Dash. Well, go on, and prithee un-
bosom thy self, we may be free one
with another, we both piss in a quill,
or at least draw out of the same hole;
communicate chearfully, for the *Fops*
our Customers that drink the *Taplast* shall
never know a Syllable on't. Your inte-
rests and mine are the same, so you may
be sure, not a tittle shall come out of me,
tho I were to be rackt (not as we do our
Wine, but in a torturing Engine.)

Chip. I will venture then, relying
upon your Integrity, tho these are *Se-
crets* that are in a manner to be sacred,
and preserved very warily from Publick
Knowledge, because it wou'd prove
very detrimental to all our Brethren of
the brewing Trade; so 'tis but com-
mon prudence we be tenacious in the
matter.

Dash. Alas! the Fiddle-caps shall
never know a jot of this matter, but
good Lad open your Cabinet, for my
ears itch to hear that out; come on,
pray now be candid and hearty, and
that you may deliver it with most flu-
ent utterance, here's a bumper to thee, of
a Pint of the best *Real* in the Kingdom.

Chip.

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Chip. Well, now I have pledged thee,
and feel the generous heat extend it self
o're all my body; the bloud of my veins
begins to circulate swiftly, nay my very
tongue seems as if 'twere oyl'd, 'tis as
limber and pliable as you wou'd wish
it.
Dash. Have at it old boy, away with
it then.

Chip. (I will; first then you are to
know my meaning by bringing down
Wines to a common or current price of
twelve pence (as formerly) or eighteen
pence (as now) per quart, tho the Vint-
ners lay them in dear, as they have done
for some of the years during the late War,
and as they will be forced now, and for
some time to come, at least till the Sea-
sons mend and return to their true tem-
per is effected several ways.

Dash. As how?

Chip. There is a Liquor nick-named
Freeze, which is nothing else in down
right earnest but a hungry, vthin, sorry
sort of *Cyder*, which does us a great
kindness in lowering our Wines, that is in
helping us to afford to sell at eighteen
pence the quart, and get handsomely
for let matters go how they will, we
must

must have a swinging profit) we whip abundance of this *Freeze*, into our *Tipple*, and it goes off as currently as can be, nay, as tho' it were every drop *Winter*.

Dash. Ay so it does, tho' faith you tell me a secret, for our Masters keep us in ignorance as much as they can, for fear of babbling when we are drunk; but this I know, which confirms what you say; that the *Cyder-men* have had a glorious time of it for some years past, there are several of them grown damnably rich of late, who were but poor scoby fellows a while ago.

Shipi. You say true, nay and the Town takes notice of it, *Dash*. I observe indeed we have sometimes *Runnells*, *Hagbends*, and *Pipes* brought very privately in the night time, and laid down in our Cellar, but whence they come we know not, for the Secret is kept as close as may be, only we see the *Cyder-man* come to our House and receive his Money, when he tips us a *Decus* or at least a *George*; but how our Master and yours manage matters afterwards, that is, how they be-devil it, and brew it, I know not, we are kept in the dark.

dark as to that, only as we flutter up and down, while we are fetching Wine for the several Companies in our House, we see plainly that there is some conjuration in hand.

Chip. 'Tis really so upon my honest word and credit: Now we who are the Agents have nothing of the mystery concealed from us; besides pray where's the harm of mixing *Cyder* and *Wine* together, 'tis neither unwholesom, nor untoothsom, for the *Freeze* lies a great while a softning and mellowing upon Wine-lees on purpose, and when it is very fine, in it go's.

Dash. But if Gentlemen knew it, they'll be very unwilling to pay for *Wine*, and have *Cyder* topped upon them in the room of it, besides in reality it can neither be so wholesom nor toothsom, for 'tis flatulent, mixes ill with, and makes but bad blood, (whence proceed near all Diseases, and we never care to drink any of it our selves.

Chip. No nor we neither, for we know better things.

Dash. However we swear and protest to all those that use our Houses, that there's nothing but *Wine* and *Wine*, *Red Florence* and *Red Port*, and sometimes
(espe-

(especially to those that are fond of that Country Wine) a Dash of *French*, which we do now for the most part put in, to prepare their Palats, against an open Trade with *France*, tho that Kingdom will never recover the great Commerce they once had for many years together with us, nor will their Wines be drank in *England* so generally as they were, the *Ports* will carry the day, they have body, that is *strength*, and that now a days pleases, for our People love to have their Heads and Stomachs hot, as soon and as cheap as they can.

Chip. Besides, I have heard some very great and curious *Naturalists* affirm, that the Gentlemen of *Herefordshire*, by frequent drinking of *Cyder*, (tho the best the Country produces, and which shou'd one wou'd think agree well with them being the product of their Native Country) are exceedingly afflicted with the *Gout* in particular.

Dash. If these *Sparks*, who as you say drink the best of the kind are plagued with that damned painful disease, what will become of those that swallow down so much of our delicate *Freeze*, which you hinted just now, is the poorest hungriest sorriest sort of all.

Chip.

Chip. Why faith they'll be smoaked off
with the *Chiragra Podagra*, and the rest
of the Species, till it fly to the Stomach,
and then it is mortal beyond all help;
away they must pike then to the Devil
and his Dominions; but Mum for that,
not a word more of *Cyder*, least it should
spoil our Trade; it must not get into
the publick mouth; now but a few know
it, and they don't mind it much, but as it
comes in at one ear it goes out at t'other,
tho if ever it should slip into Print, it
would expose your *Knavery* beyond re-
trieve; nor could the *Matchless Imph-*
dence of the *Vintners*, or their true *Copies*
the *Drainers*, be able to outface it, tho
they'll both lye and swear tightly theres
no such thing done or practised by them,
or any of the Fraternity they know of;
at least, if it be, 'tis only among the
Hedge-Taverns, *Bawdy House Taverns*,
Spring-Gardens, and such paultry places.

Dust. I must confesse a Brazen Face is
so essentially necessary to our Profession,
that 'tis a proper ingredient in our Com-
position, and often helps us out at a dead
lift; when we are a plunge, it does us
signal service, but what can Oaths,
Cruses, Imprecations, or the most front-

less Impudence say against *Fact*, for several Gentlemen and others have caught our Masters in the very Cyder-mens Vaults, tho they slid away, and would not have been seen if they could have helpt it; but folks will take notice and talk, nay, I have been pump'd about that matter, tho I stood buff, and denied that we ever mixt *Fraeze* with any of our Wine, being indeed as I said before, unacquainted with that mystery of Iniquity, nay, or the very nick-name it goes by; and further, I have had it buzz'd in my Ears that not only the *Scurv-drel-Houses*, but all the *Top Taverns* in Town use abundance of that rascally stuff.

Chip Nothing more sure, for we *Squires of the Tap* are privy to all those matters, and tho we have an interest in it, yet by Gingo it is a shame that the World shou'd be so abus'd and imposed upon, their pockets pickt, (that is cheated of their Money which is the same thing) their health impaired, diseases entay'd upon them, and Death it self as it were brought upon them before their time. In a word, we are become the most exquisite Brewers in the World, a pox of our skill that brings so much damage

(14)
to the publick, say those that know our
tricks) the *Spaniards* are fools to us,
and so are the *Fr-----ch* too, tho their
Vintners are complained of, for mingling
Druggs with their Wine, that are prejudi-
cial to the health of the Drinkers, for
which they ought to be punished, as the
Author of *Colbert's* life has it, page 129.
l. 2. I say, we have out-stript all, nay,
and the very *D--ch* at *Dort*, tho they
are clever fellows at it, and sell that
for *Rhenish-Wine*, which has not a drop
of that noble Tip in it, being only *Ro-*
chel, Cogniak, or Nants White-Wine,
rackt into a fresh Cask, strongly scented
with Brimstone, Alum, *Aquavitæ*, Nut-
megs, Cloves, Coriander, and Anni-
seed, into which they put the *Parel,*
(whites of Eggs, Bay Salt, Milk and
Conduit Water, beat together,) and af-
ter that add a proportionable quantity
of clarified Honey and course Sugar,
and then to give it the delicate flavor
of *Rhenish*, they whip in a decoction of
Clary Seeds, which makes it pass for *Rhe-*
nish in the *Must*, which they top for
the most part on the foolish *English*;
not much unlike to this, is the base
practice of our *Cyder-men*, who sell that
for

for Syder, which has not a drop of the
juice of the Apple, but is made of Tur-
nips, &c.

Dash. They are da--d R--es for do-
ing so as well as the ---

Chip. The Vintners here are no better,
for tho Wines are subject to Sickneses,
and ill Accidents, as *Warkings*, *Frettings*,
Pallings, and other *Alterations*, and
may, nay, ought to be cured, helped, and
skilfully managed, yet nothing should
be us'd that is prejudicial to Men's Healths,
as is *Stum* (which is the Flower of Fer-
menting Wine, and us'd to recover de-
cayed Wine by putting it into a new
Agitation, making is drink pertly or
brisk) *offends the Head and Stomach*, tor-
ments the Guts, and causes loosenesses;
and yet nothing is more ordinary in life
among them and the Coopers, who va-
lue not the hurt it does to the Drinkers,
if they can get off their Flat or Eager
Wines; besides, how frequently do they
draw unfine Wines, (and to conceal the
cheat, they have invented thick curl'd
glasses, which generate the Scurvy, and ad-
minister matter for the Stone and Gout.

Dash. We are usually careful to fine
our Wines down as much as can possibly

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be

be done, not only because they are unwholesom, when the Lee flies thick about, but also because they are unpleasant to the pallat, and not so beautiful to the Eyes, tho not one in ten of our *Chapps* knows the difference, if it be but (thought) Wine, it goes down cleaverly, poor fools, they have not Wit enough to distinguish good from bad, except it be very plain indeed, dead or sowre. Nor need we care if all the World knew our Art in that particular of fineing Wines, for it is done with *Isinglass* pluckt or cut in small pieces and dissolv'd, or *Whites of Eggs*, which will carry down a Floating or Flying Lee, but if it be very gross and earthy, we use powders of *Alabaster*, *Caland-Flints*, *White Marble*, *Roch-Alum*, &c. which by their weight sink all before 'em.

Chip. There's no harm in all this, nor in correcting the Wines that are *Lumpish*, *Ropy*, *Qually*, *Rank*, *Eager*, *Prickt*, &c.

Dash. No, but I'll tell you what I have heard a great *Physitian* say, that the *Lime-stones* which we slack and put into our Canaries to cure them of their sicknesses, as *Rankness*, *Eagerness*, or *Pricking*,

ing, is very injurious to hot and dry constitutions and meagre habits.

Chip. That may be; but I am pretty sure there is no hurt in the *Flanders-Tile* and *Roch-Allum* we use to cure the *Prick-
ing* in *French Wines*, nor of the juice of *Slows* or *Bullice*, of which we put sometimes a gallon into a Hoghead of *Claret* to recover its briskness and piquantness, this makes it drink brisk and rough, which taste alone (formerly) pleas'd most, tho (now) almost worn out. Or what damage is it to the Drinkers of *Rhenish Wines*, that to cure them of their being prickt, we rack them into a clean and strong scented Cask, and add to the Wine a due proportion of clarified Honey, with *Skim-milk* beat together; or to meliorate the taste of hungry, thin, eager *White-wines*, we infuse a good quantity of *Malaga Raisons*, stoned and bruised; or to keep stinking *Wines*, we rack them from their old and corrupt Lee, and to give them a fine flavor, we hang bags of Spices, such as *Ginger*, *Zedoary*, *Cloves*, *Cinnamon*, *Orrice*, *Cubeb*, and other *Aromatics*; or use *Elder Flowers* and tops of *Lavender*, to do the same thing.

Dash. Thou art thy Arts Master I see, *Chip*, away with it, let's hear all thy Recipes, for as yet I find no fault with any of em.

Chip. No, nor can you with reason, for what prejudice is it to the *Sack-drinkers*, if when those sorts of Wines begin to languish, we refresh them with a *Cordial Syrup* made of most generous Wines of Sugar and Spices.

Dash. You say well.

Chip. Or when *Claret* is inclin'd to a Consumption, if we throw it upon a new and richer *Lee*, and the shavings of *Fir-wood*; that the Spirits being recruited by the additional *Lee*, may be kept from exhaling, by the unctuous substance of the *Turpentine*.

Dash. True, but I have often heard Gentlemen complain (after a Debauch of this Wine) of exceeding dulness and pain in their head, which indeed it infallibly produces, as also a swimming and dizziness, which is doing violence to Nature; nay, and I have known several Companies leave our House upon it, tho' poor Gentlemen tho' knew not the Cause of those pains.

Chip.

Chip. Psha, this is nothing to what comes after, I have all this while been entertaining you only with the Niceties of our Skill and Art, in managing, preserving, and recovering of Wines, to make them pass off well, in which we use abundance of *Stum*, *Sweets*, *Old Harry*, *Molasses*, *Sugar*, and several *Compositions*, which I have hinted at before, as also *Milk* to whiten *Sherry*, (as we phrase it) often mixing *Brandy* with that and other Wines to raise them up or quicken them when they are languishing, as also to give them strength and vigor when they are *thin*, *lean*, or *hungry*, (as many Wines naturally are) nor is it a report, fancy, or invention that we put *raw flesh* into our Wines, for we do sometimes throw *raw Beef* into our fretting Wines, to let them feed upon; but all this is but a trifle to what I am going to impart, for this carries no great ill with it, for it properly belongs to our profession to amend our Wines, tho it were to be with'd that we used things less noxious in themselves, and not so destructive of men's Healths, which might be, if we were a little *honest*, less greedy of gain,

gain, and getting vast Estates ; I must confess I my self am asham'd at our beastly brewing, which now exceeds all reason and measure, out-doing all that was ever done before.

Dash. War-hawk , prethee forbear firing, *Chip*, Udsheart we shall be ruin'd if ever these things come to the publick ear, thou begin'st Lad to bewray thy own nest, which the Proverb says, none but an ill Bird will do ; these Sallies seem to be very vehement.

Chip. Why faith I was going on too fast, inveighing against our *Fraternity* : But hush, I have done, there is no fear of this Dialogue of ours ever coming abroad into the World, if a secret can be kept betwixt two, which the wise *Italians* assert cannot be, except one be away ; however, I have faith in thee and so shall proceed.

Dash. Do dear *Chip*, thou art an honest sincere Fellow, which I fear very few of thy Trade are any more than of ours.

Chip. Egad I think you have guess well, but to the business in hand. I shall now present you with such a bundle of *Knavish Tricks* , and *Dis-ingenious*

Præ-

Practices of Vintners, Wine-Coopers, and all Traders in Wine, both wholesale and retail, as well Top-Taverns, as Hedge, I say from the highest to the lowest, from the Glorious Planet behind the Exchange to the Vinyard in Low Lambeth, and from the Greatest Vaults or Magazines of Wine to the meanest sorriest Cellar or pennyworth of Wine-Cellar within the Bills of Mortality, nay, indeed throughout the whole Kingdom, that you must shut your Eyes for fear of being struck blind, and offer up your Prayers to Saturn, who governs the auricular nerves, lest you lose your hearing, for by all that's good and sacred, 'tis villainous and base.

Dash. Out with it boy, without any more preamble or preface, I am agog to know it all.

Chip. You do know the greatest part of it already, and have a thousand thousand times practised it, but yet some things are *new* to you; however, new and old, take 'em rough as they run. Wines in general are not only abominably Sophisticated, but lamentably metamorphiz'd; The very *Rosycrucians* themselves transmute not metals so much as you and we do Liquors,

quors, which by the way, you and I can't but own to be damn'd *Roguary*; it is much some severe Laws have not been enacted, to correct these Enormities, or at least the old ones put in Execution, and Inspectors or Supervisors erected to see that no such *Cheats* (for so indeed they are) shou'd be impos'd on the people, 'tis picking their Pockets, 'tis robbing them of their Money, and (which is yet more valuable) their Health, without which there can be no true Relish of any pleasure in this World.

Dash. Pray don't Philosophize, but keep to your *Last* and remember *ne Sutor, &c.*

Chip. Well then, There is nothing more ord'nary than for great Quantities of *Malago* to be put into *Canaries*, (the greenest, hardest Wines of that kind admitting most;) *French-Whites* into *Rhenish*; *Rhenish* into *Sacks*; *Sacks* and *Malmseys* into *Muskadels*, (for which last *Tents* and *Alicants* are now sold every day;) *Sherry* for *Lusanna Wine*; *Roche* or *Nants Whites* are transform'd into *Claret* by dashing them with *Red*; *English Wines* (not only the juice of the Grape, but also *Cherry*, *Gooseberry*, and *Cur-*

Currents. Wine into *Foreign*; *Malago* and *Sherry* mixt are sold for *Choice Canary*; *Red Florence*, *Red Port*, *Claret* and *Alicant* all jumbled together, and sold either for *Red Port* single, or for *Claret* single, with many other *Knaveries*, (which to be thoroughly handled would require a Volume of bulk to write them into, or wou'd keep us *Dialoguing* a fortnight at least.)

Dash. Why here's no great harm in all this.

Chip. No more there wou'dn't, if there were nothing but Wine and Wine put together, tho sweet Mr *Dash*, if you please but to consider this point a little, before you transit so hastily, or pass it over, it is of more moment than you think for; you and I wou'd take it very ill from a *Woollen Draper*, if he shou'd sell us course *English Serge* or *Drugget* for fine *Spanish Broad Cloaths*; or a *Mercer* (tho they are *Knavish* enough) to sell us *Plush* for *Velvet*, which is no more than what you the *Vintners*, nay, and *Coopers* in the Town, do every hour in the day, and oftner if ye go into the *Cellar* to fetch up any Wine; you know as well as I the composition of Wine is manifold,

D

and

and you draw out of two or three several Casks for one quart or pint to accommodate it to the palates of your Customers; but that which is indeed abominable beyond all tolleration, is the unreasonable dose of *Freeze*, (poor sorry *Cyder*, as I hinted before) whipt into almost all the Wine that you draw, so that to be serious 'tis rare that you draw, any Wine *neat*, tho you pretend to all Companies it is pure.

Dash. But prethee what's that to a *Corinthian* Brother of ours, that lives not far from *Ludgate Church*, who boasted lately (when drunk as we now) to a certain Company of *Foreigners*, that he had drawn *Champaign*, *Burgundy*, *Chablais*, and other curious and costly Wines out of the very same Cask a hundred and a hundred times, adding, that nothing was so easy, as to deceive Mens Palates, in Themselves various, uncertain, and often misled by fancy and humour; that a little supple-cringing, a few fair words, and a positive asserting it to be such or such Wine, neat and rare, carried it off cleverly.

Chip. This was a *Whipster* i'faith; tho I have often heard Gentlemen complain
of

of the Damn'd Impudence of the *Masters and Drawers*, who will hardly ever own any fault in their Wine, tho' never so apparent or easy to be discovered, but will outface their Companies, that the Wine is fine when 'tis not; that it is brisk, when flat; that when it is in *ferment* or upon the *fret*, having a white froth round about the Glass, (*being stunn'd a little too much*) that 'tis only the first quart of a new pierc'd Pipe, and pierc'd on purpose for them, which is a meer *Flam* and Evasion; but all this and a great deal more they dare do, and can stand to briskly upon occasion.

Dish. Lord! how prettily we top upon those *Rum Culls* called Gentlemen, who pretend to know every thing; a few Pickles to relish their Wine, or a few clean Lies to make them have a good opinion of it, engages 'em to whip down abundance, and so they are fairly cheated of their *Health* and their *Money*. Whereas if they but knew what they drank, and how we brew and trick them every manner of way, (as wise and as cunning as they fancy themselves) they'd e'en swallow less *Beverage* and more *English Manufacture* sound honest
Belsh,

Belfs, which they wou'd soon find to agree better with their Constitutions, and prevent those Tormenting Twitches of *Rheumatism* and *Gouts*, the *first* with difficulty, that is, with letting out all their old and making all new blood, is after this manner cured, or patched up, but the *last*, alack ! is without Remedy, nothing but Patience, the Mad-dog Medicine, avails any thing in those most cruciating Anguishes.

Chip. 'Tis much those dolorous Pains should not be their Monitors after so much Experience.

Dash. Ah so it is; however, if the old Fellows, those true Soakers, left us, we should be supplied with fresh Setts of young Debothees, who feeling nothing (at present) can fear nothing (for the Future) and who are so fond of our houses, that they cou'd live there (I think) for good and all : they melt the whole evening with us, till two, three, and (sometimes) four a clock in the morning ; We have also *Whisk* and *Swobbar-men* that stick by us as long, and spend as liberally as petty Princes, being indeed very choice Customers to us, during the whole, long, tedious

dious, dull, (and often) very cold Winter ; thus they divert themselves with good Fires, and strong Red Bub, led chiefly to this, and other Games, *viz.* *Hazard, &c.* by an Itch of Covetousness, I say, by a greedy desire of Gain ; whereas alas ! we are the only Gainers : We are the true Gamesters, and the most biting *Sharpers*, for at the Long Run all the Money of the Company comes into our Clutches, tho they don't dream of this, which is yet true in Fact.

Chip. That's most certain ; but you have a thousand Tricks to amuse and deceive your *Topers* ; Prithee let's hear a few of them, be as candid to me in that matter, as I have been to you in laying open the whole Secret and Mystery of the *Brewing-Trade*. By *Bacchus*, our Boozing Deity, I have not conceal'd the least point from you ; I cou'd have spun out my discourse, and so have lengthned our *Conference* ; but being a passionate Lover of *Brevity*, I summ'd up the whole in a few words.

Dask. You have so, and I thank you for your great Freedom, and Openness, I'll make you the best Returns I
an,

can, and tho my performances will fall very short of yours, that is, they are neither so curious nor considerable, yet you who are not so conversant with Gentlemen (I mean in attending them) and their numberless *Maggots*, I believe will be not a little diverted, with what I am about to communicate to you.

Chip. Let's have it then old boy; however, do nothing rashly, here's a *Brusher* to ye of a Quart, I scorn to drink less; besides, if this cackling of ours goes on without wetting our Whistles now and then, I shall have but a Dull Account of Affairs I fear, we shall be but sorry Company neither; besides, our *Booz* will die upon our hands, we'll empty the t'other *Shafts-bury*; and please the Stars before we part; it costs us nothing, and the Devil's in it, if our Masters out of their *ungodly gain* can't afford to let us be drunk once a week at least; but now in spite of them, and their narrow sneaking humors, we'll bowl it away for half an hour more, seeing we are befriended by this blessed Opportunity, secur'd by all surprize, or can we be

be over-heard, in this safe and private *Store Vault*, where we thus happily met, and so here's *King William's health, and safe Return*.

Dash. With all my heart honest *True-penny*, were it a peck of *Claret*, I'll take it off *Supernaculum*; you see brother *Chip*, I drink clean.

Chip. Ay so thou dost, if there be an honest Fellow of the profession thou art one.

Dash. Well now to perform my promise. Amongst thousands of Whims to be observ'd amongst the *Red Fustian Drinkers*, I shall present you a few of the most Ridiculous, and faith when Companies are gone, we *Drawers*, together with our *Pot-boys*, *Beer-boys*, *Porter*, nay, and *Cook maids*, laugh aloud and long at those poor *Animals* that resort to our Houses, who are so easily imposed upon, and trickt by us, without so much as dreaming of it.

Chip. No, no more they don't; but pray expedite.

Dash.

Dash. What a pretty notion have the *Coxcombs* that use our houses, that tipping the Drawer *three-pence, six-pence*, nay, or (as sometimes the foolish *Extravagants* do) a *Shilling*, procures them the *better Wine*; whereas, alas! we must draw such as our Master orders, for from him we have positive directions what to do; he appoints the *Fatts, Butts, Pipes* or *Hogheads* that are next to be *Can'd* or *pierc'd*; we durst not for our ears do it before, or without his command, tho to please the *Dul-pickles* we tell them (and often too!) that it is a *fresh piece of Wine*, and that we *pierc'd* it just now, and on purpose to please them; and yet for these *Unfeather'd Fools* to talk of *Interest* in such a Drawer, or in such a *Master*, at such a *Tavern*, how silly, weak, nay, ridiculous is the very expression it self, as if they ought not to have good *Wine* for their *Money*, but must *court, caress*, and *bribe* the *Slaves* that attend on and live by them, and yet not have it neither.

Chip.

Chip. You say all in all, but yet if the *Bubbles* will be *bit*, who the pox can help it; besides, you have the pleasure of getting their Money, and laughing at them into the bargain, as you insinuated *alate*.

Dasb. Yes, there are some of us Drawers, that at the end of our Apprenticeship, have laid up a Cod of five or six hundred pounds, besides, which is a round Summ you'll say, what we vainly spend when we get abroad, for according to the example of our Wise Masters, we are the most extravagant Creatures in the Universe, and value no more the spending of twenty, thirty, or forty Shillings, than others do of so many pence.

Chip. Very pretty fellows indeed, but however let's hear some more of the Shams upon Gentlemen.

Dasb. The Palats of our Customers have more different gusts than the Moon has Figures; one must (as he calls it) have a *dry Wine*, another a
E *rough*

rough Wine ; t'other a smooth mellow Wine, but most agree in a very strong Wine ; which we know how to strengthen, with Brandy, or Spirits, which are cheaper, and to lengthen it ; for the Fame of one extraordinary high priz'd Pipe of Canary (we buy) sells us twenty, and yet we perswade, 'tis all of that very Pipe ; and for of Pontac (when in vogue) and of other Wines, (now) as Barcelona, Gallicia, Lisbon, &c. And when one of the Company finds fault, usually the rest concur, then the Drawer is blamed, sometimes the Master in heat is 'called for, and upon complaint of the *Bub* being bad, I'll please ye I warrant ye Gentlemen, says he, I'll draw a quart my self, (as if that was such a mighty Favour by the way) down he goes to the Bar, and sends any of the Drawers to such a Cask, and bids him give it a dash of such another, which is *Freeze* ; up he brings it to him, who gives it a good thump on the ground, to brisken it a little, but stays till the ferment is over, and having staid pretty long, to possess the

Fops

Fops that he pierc'd a fresh Pipe
 for them, (as he to be sure
 tells them) up Stairs he moyes,
 and with Hat under Arm, and
 an awkward bow filis out a glafs
 himself, Here's Wine, Gentlemen,
 says he, I defy all the Town to
 draw such; they all having drank
 How do ye like it my Masters?
 adds he; it is answered, *Nemine*
Contradicente, incomparable Wine
 indeed ! this is something like Wine.
 Nay, and very often the same indi-
 vidual quart, or pint of Wine, that
 is dislik'd, and pretended to be
 changed, is brought up again, with-
 out addition or diminution ; nor
 in the Summer is it unusual for us
 to whip in a good glafs of Spring
 Water, which cools and refreshes
 the Wine, and makes it more

pleasing upon the palat; besides a thousand other petty tricks; which I have hardly time to run over; but for the *Grand Cheats* and *Abominable Abuses*, which you chearfully communicated to me, and for the *lesser Deceits* and *slights of hands* I have acquainted you with, I suppose we shall both agree that there be no Words made on them, but that what has past between us at this Interview, may be for ever buried in our Breasts; for if the World were informed of our Wicked Acts, and Pernicious Practices, in adulterating and Sophisticating our Wines, and even in selling that (every day) for Wine, which is not Wine, surely they would abandon our houses, and cease defiling their

their bloud with our accursed
 Mixtures, and so dear *Chip*, I shall
 conclude this Conference with a
Facer to you, to the Prosperity of
England, and to the retrieving of
 our Trade and Commerce.

Chip. Done, Mine's off, and
 now Farewel most heartily.

Dash. True brother *Soker* ;
 I wish ye *bonas noches*.

F I N I S.



THE
TAPSTERS
DOWNALL
AND THE
DRUNKARDS
JOY,

Or, a Dialogue between *Leather-beard* the Tapster of the Sheaves, and *Ruby-nose*, one of his ancient acquaintance, who hath formerly eaten three stone of Rost Beefe on a Sunday morning; but now (being debarred of that Priviledge) sleights him; and resolves to drinke wine altogether.



Printed in the yeare, M. DC. XLI.

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1844

1845

1846

1847

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1849

1850

1851

1852



1853

THE
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Or, a Dialogue between *Leather-beard* the Tapster of the Sheaves, and *Ruby-nose*, one of his ancient acquaintance, who hath formerly eaten three stone of Rost Beefe on a Sunday morning; but now (being debarred of that Priviledge) fleights him; and resolves to drinke wine altogether.



Printed in the yeare, M. DC. XLI.

THE DOWNS AND THE DRINKARDS

A Dialogue between a Drunkenard and a Tapster of the Shavers, and a Tapster, who had formerly eaten three stone of Roast Beef on a Sunday morning; but now (being debilitated of the Privilege) heighens him; and resolves to drink wine altogether.



Printed in the year, M. DC. XII.

THE TAPSTERS DOWNFALL

and the Drunkards joy, or a dialogue be-
twene Leather-beard the Tapher
of the Sheaves and Ruby
Nose, &c.

Leather-beard.

Wither away M. Ruby; will you not
know your old friends; now they grow
poore.

Ruby-nose.

Now you grow poore I hold it a gentle
Garbeto be willing to forget you.

Leather-beard.

What not one cup more of our briske beere
which hath set that Tincture in your well dy-
ed scarlet face; are you resolved to leave us
so? this is most discourteously done of you.

Ruby-nose.

I cannot stay faith, more serious imploy-
ments draw me away.

Leather-beard.

What doe you say, will you tug a peece of
rosted Beefe for all your haile?

Ruby-nose. Yes were it sunday morning.

Leather-beard. Truly Master Ruby-nose you
doe not well to jeere your poore friends now
they are in misery; you know I have ever been
officious and used you with all due respects and

never

(2)
never denied to let you in upon any Sunday
morning (when you had money, and now you
see wee are debarred of our former priviledges
doe you jeere us?

Ruby-nose. You mistake your selfe. I doe not
jeere you, neither doe I know of any distast that
befell you, or how you are likly to fall into po-
verty: you only tell me you are growne poore;
which is sufficient to make me contemne you,
or any else which I heare are like to fall in the
base condition of poverty, especially when I
consider how (*Hera sers*) hath prosperously fa-
luted me with happy tidings, nay rather rap-
tures.

Leather-beard. You make me to stand amazed
to heare of this your suddaine transformation;
pray doe me the favour to let me heare what is
that good newes that was so lately transported
to your ambitious eares.

Ruby-nose. With due reuerence of your wor-
ships leather thinn growne beard you shall ex-
cuse me, yet if you doe relate your ill newes
first it is very like I shall tell you my good
newes; Therefore if you please you may begin
first.

Leather-beard. With a most sorrowfull heart
I will relate unto you the saddest newes that e-
ver befell unto us Squires of the drawing socie-
ty of the Tap.

Ruby-nose. Good small Beard proceed.

Leather-beard. Why you know the benefit:
my masters poore widdow got every Sunday
morning

morning by her thimne cut halfe slices of roasted
beefe, how she made the gent to pay for the vin-
egar and pepper they ate with the rost-beefe at
prayer time; and how I sould my Ale and
Bere all that time at Bawdy houses prizes.

Rub. I am very sensible of it.

Leath. I know likewise you are not ignorant of
what innumerable numbers of minced Pies wee
sould every Sunday at dinner, and what benefit
wee made of the refuse of the flashed rost beefe.

Rub. I know all this very well.

Leath. Nay, one of the chiefest matters is
behind; How many great grose of Plumb-cakes
and Cheese-cakes, what stewed Prions and Cu-
stards we have sold every Sunday at Prayers time
in the after-noon, and what doings wee have
had all the day after; Oh in those dayes I was a
man of great calling. I assure you we have taken
more money on a Sunday, then we have taken all
the week after.

Rub. Why all this I confidently believe,
therefore I pray what of it?

Leath. Oh: Sir those dayes are done, we must
now fall to our prayers on a Sunday, and keep
our doores shut all the Sunday long, and sing
Psalms, if we please, but we have never a roome
to the street.

Rub. Why, how cometh that about, you
have not liberty to open your doores on a Sun-
day as formerly?

Leath. The Correcting Parliament; that hath
a sight into all trades, hath made an order to the

contrary, which is put in strict execution wee are now in more feare of the Church-wardens than of all the Back-clappers; and Clenching Tenter-hooke Bailies, in the towne.

Rub. Why, you may see the Church-wardens and so gaine your priviledge.

Leath. No sir, they are not so mercenarie, as Mr. smell-smock the promooting Parator is; six shilling a quarter, and free access to a lustie chine of Rost Beefe, *Cum Privilegio*, will not give them content.

Rub. Why, what doe you intend to doe? for I know you must needs breake, if this strict order continue.

Leath. Indeed I thinke soe too; and I doe not know what course to take except my old mistris, mistris *Bloomsbury* the fat Bawd in long Acre, will intertaine mee againe to bee some sub-jorney-man pimp; or preferre me to some such house that hath good trading, and there I mayerne lesse or more, night and day; but pray sir amongst all these sorrowes, let mee heare of the good that hath befallen you.

Rub. Why? I tell thee Boy, the great Grape sucker that hath the Patent for *medow wine*, hath taken a surfeit at Westminster, and his patent is broken, I shall not need now to breake two shillings for a quart of sack; He drinke no more beere now sweet master Leatherbeard.

Leath. I am glad to heare of this good newes; yet I hope you will not so suddenly leave off, the wholesome dewes of well seasoned barlicorne.

Rub.

Rab. I Avenge by the Baccanalian Fontaine;
He no more Beer nor Ale, so is drinke for the
mechanicks; poore and will make a man low-
le; I am resolved never to drinke anything but
Canarie; as expected at the Tavern and house

Leath. Why first suck will inlay your
deepe dined face; you had more need of a cooler,
and rather drinke water than any strong li-
quor.

Leath. It shall be Anis-feed-water then; none
of your Lambs-Conduity water; But dost thou
heare, dost thou hold mee such a foole as to
spend a thousand pounds for the inriching my
face; by inlaying, inameling and double gild-
ing, and now seeke to destroy all that costly
worke, you are mistaken.

Rab. I believe if you hold on, you will bee
taken in the night for an *Ignis fatuus* or a going
fire.

Leath. Why that, is my chiefe ambition;
And I will tell thee what I intend to doe, I will
maintaine some five or six of the chiefeest Balad-
Rimers the whole ragged regiment affords, to
make pamphlets and learned Ballads of that
great Aldermans projects and the end thereof,
and how many poore Vintners hee broake by
making them to take their wines at his rate
with thankfulness; How many spirits he man-
teined to spie into the poore Vintners cellars,
lest they should draw any wine that had not
beene damned in his large warehouse, and not
branded with the extorting seale of avarice,
which

that the Ballad was a new one
for expressed heavy what was
long expected blessing, that the
was expected at the Tavern at home
farewell Tapster, He drinke to youe Beere
Leith, May your Worships be good rich
and rather drinke water and strong li-



FINIS.

of your Lampes-Corollaries
beere, dole those Ballads
spend a thousand pounds for the printing my
face; by insuring, and double gilt
ing, and now look for all that costly
works, you are with
Ray. I believe it will hold on, you will be
taken in the night for my own sake or a going
fire.

And I will tell thee what I intend to doe, I will
maintaine some five or six of the chiefest Ballad-
Rimers the whole ragged regiment affords to
make pamphlets and learned Ballads of that
great Aldermans projects and the end thereof
and how many poore Vintners hee broke by
making them to take their wises at his rate
with thankfulness; How many foliots hee man-
rined to spie into the poore Vintners cellars
if they should draw any wine that had not
beene danned in his large warehouse, and not
pounded with the exceeding heat of summer

VINTNERS ANSWER
TO 966. h. 38.
Some scandalous Phamphlets

Published,
(as is supposed)

By
Richard Kilvert; K.

And abetted in some points, by his Brother
Roger, and Alderman Abel.

Wherein the Vintners vindicate
their owne Reputations to the world, for
satisfaction of all such as know not the said
Kilverts

Wretched and lewd conversation, or have
credited his foule impudent defamations
suggested against them.

Magna est veritas, & prevalebit.

London, Printed, Anno 1642.

Answers Answer

Answers to Questions

Answers

Answers to Questions

Answers



Answers to Questions

Answers to Questions

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Kilvert charges the Vintners of three things :

1. **T**hat they were Projectors, and contrivers of that Imposition of 40^s. *per Tun*, which the King set upon Wines imported in 1637.
2. That they were also actors, and prosecutors of the same, to the grievance of the Subject, by Farming the same, by taking 1 d. and 2 d. *per quart*, upon the consumption of Wines above the due price, by obtaining other illegall things, &c.
3. That, in all these things they had a covetous desire of enriching themselves, and that by these means they have greatly enriched themselves.

But it is to be noted, that in these points of Accusation, *Kilvert* is himself a Delinquent, and was first accused; and yet though he act but the part of a Recriminator against the Vintners, he takes upon him to be a competent Accuser, and takes advantage against them, to take away the validity of their testimony, as being by him pronounced guilty.

It is apparent also, that both *Kilvert* and Alderman *Abel* do recriminate the more confidently, because the Vintners are a considerable body, and supposed able to make great restitution to the Common-wealth, if they can any way taint their innocence, and lay them open for Delinquents; yet both are now equally furious.

The substance of that which Alderman *Abel* says, is; That that this Project was first contrived at Court, and for divers years urged upon the Vintners, and yet ever repulsed, and never consented too, till 1637. And then he being Master of the Vintners Company, (divers of them being then prosecuted in

(2)
Star-chamber) was requested by them, to redeem them from ruine. And thereupon, whatsoever he undertook, was meerly to preserve his Company, and for no other ends; and that he had no benefit by it, nor aimed at any, nor did effect any thing, but with the consent, and by the authority of the generality of Vintners.

Kilvert being a man indued with more boldnesse, makes no scruple to alleage further, That it appears by the Acts and Orders of their own Court, that they were the plotters and contrivers of that Imposition. He instances in the Act of 6 Nov. 1637. and the 22 of the same, when the Company consented to treat of, and to admit the Imposition; and he says, That from thenceforth the whole Project was managed by the Company in open Court at their Hall, and the major part of Vintners were present at those Courts, and did consent by holding up of hands. He instances in the 7 of Febr. 1637. when the Company appointed ten Contractors to seal to the King; and in the 13 of Febr. when *Griffith* by Letter gave instructions how to covenant. He says he was no Patentee, nor issued money in the businesse, nor was at the Vintners Hall, till the Project was concluded and petition'd for.

The substance of that which the Vintners reply hereunto, is; That the Imposition cannot be said to be contrived, or plotted in Nov. 1637. or after Nov. which was in being long before, much lesse can the Vintners be supposed to be the contrivers and plotters of that, which for divers yeers before they had opposed and withstood at their own great perill and prejudice.

That whosoever the contrivers and plotters were in the conception, yet if the Midwifery and Nurcery of *Kilvert* and Alderman *Abel* had not given it birth, and growth afterwards in the world, it must needs have proved Abortive.

That in 1632. an Imposition of 4 l. per Tun was solicited by some of the Kings Ministers; and in 1633. my Lord Treasurer *Weston* was urgent to bring the same to passe; but the Vintners not submitting thereto, an extrajudiciall Decree in Star-chamber was procured, prohibiting Vintners to dresse meat, and restraining them from divers benefits of their Trade; and this was prepared as a lash to over-awe them, and either to abate their

their courage in opposing, or to diminish their power.

That my Lord *Cottington*, and some other Lords did enforce the same Imposition; and that my Lord of *Dorset* pitying their condition, and thinking them not sufficiently knowing of their own state, was so open and plain, as to tell them, It was folly in Travellers, to deny their purses to Robbers upon the way, and to draw harm upon themselves thereby, when they had no sufficient force, either to defend their purses, or their own persons: And having so told them, he applied it further, and swore it was their own case.

That this Decree being so formidable in those injurious times, and so many great men so intentive to make use of it, in 1634. The Vintners did furnish for the Kings use, 6000 l. upon a promise to be secured from the Decree, and to have their due Priviledges confirmed in Dec: following, and they obtained a Warrant from the Councell-Table to that effect; and some of them being not fully satisfied with that dilatory Warrant, my Lord of *Arundels* words were, Will you not be satisfied with the word of a King?

That till Dec: aforesaid, the Company remained quiet and unmolested, but then seeking the promised assurance, their answer from the Lords was, That the King wanted more money, which if they would supply, more then had bin promised should be performed, and the Imposition was again pressed.

That the Vintners not yet yeelding to the Imposition, the force of the Decree was inculcated, and the promised assurance was denied, the 6000 l. lent was detained, and used onely as a bait to draw them further on, and to intice them into the Project.

That other great suits then hanging in Star-chamber to be solicited by *Kilvert*, the Vintners injoyed some rest till 1636. and then divers of them were vexed upon the Decree; and in April following *Kilvert* made his open boast, that the Bishop of *Lincolns* case being once ended, he would immediately set himself to prosecute the Vintners upon the Decree.

That Alderman *Abel* being Sheriffe Elect of *London* before Midsummer, 1636. by right whereof, according to the City custom, he was to be chosen Master of the Vintners, he refused

ie, pretending that he should be better able to serve the Vintners after the expiration of his Shrievalty.

That at Midsummer, 1637. Alderman *Abel* took upon him to be Master of the Company, his Shrievalty expiring at Michaelmas following, the Bishop of *Lincolns* triall being ended about the same time, both he and *Kilvert* had good leasure to joyn, and to combine about the businesse of Vintners.

That from *Feb.* and *Hil.* Term next, before the Vintners having been examined upon oath in Star-chamber, and confessed the dressing of Meat, &c. contrary to the Decree, there was neverthelesse no further proceeding in Easter, or Trin. Term against them; but in *Sept.* following, both *Kilvert* and the Alderman being at leasure, they had meetings and conferences, as themselves confesse, and then at the Aldermans house *Kilverts* imparted it, that he had Warrant from the King, to sollicite against all Vintners, as well those that had given over their Trade, as others, for breach of the Decree; and that *Marq. Hamilton* had power from the King, to treat with some of the Company touching His Majesties pleasure therein.

That upon the 25 of *Octob.* following, at a Court of Assistance Alderman *Abel* made this Overture known, and with great passion set forth the danger of the whole Company, whereupon some were selected to make their addresse to M. *Hamilton*, and to negotiate that affair.

That upon 31 *Octob.* they which had attended M. *Hamilton*, reported to the Assistants, that it was communicated to them from the Marq. that the King expected an Imposition but to be agreed upon by Committees, indifferently to be appointed both by the King and Vintners; and that in respect of the same Imposition, the Vintners should re-tail Wines dearer by especiall grace, and withall obtain confirmation of former Priviledges, and a grant of further benefits.

That the Marq. did impart his private advice for their yeelding herein, because though the Delinquents Fines were given him, yet he considering that the ruine of divers private men, would not so much enrich the Kings coffers, was willing to attend the Kings favour in some other suit, so that the Imposition might

might be condiscended to, for the Kings greater profit, and the Vintners better safety.

That hereupon a generall Court was called on Nov. 6. 1637. wherein much was laboured by *Kilvert* and the Alderman, both by fair promises and sharp threats, to induce to the Imposition: It was promised, that the King would pardon all former delinquencies, that the Vintners should have His Majesties especiall favour, and by the same injoy not onely former immunities, but further Priviledges also, and for ever be made a glorious Company; That they should dresse and sell Viſtuals, Tobacco, Beer, Sugar, &c. That they should be free from Informers, and have power to restrain the incroachments of the Coopers. On the other side, as Benefit was the bait, so Terror was the hook, and Destruction in the next place was laid before them; In case they did reject the Imposition, it was menaced, that they should be prosecuted upon the Decree, perplexed with Informers, disabled for their Trade, that the King was unalterably resolved to have this Imposition, whether they assented, or no; That if the Vintners were rich, the King would not be poor; That he would as soon lose his Crown land, as this benefit, that Wines being a forein Commodity, the Law allowed the King to impose upon it at pleasure; that it was also in the Kings power to suppress all but 40 Vintners in London, and that good Councell had so resolved it; And the Aldermans Conclusion was, Shall I see my Company digg'd up by the roots, my Brethren ruin'd ith' Star-chamber, and the cankerly Cooper between the bark and the tree eat up all?

That these things being so represented to the Generality in those times of violence, the main body voted rather to comply with the King by furnishing another present summe, then by this Imposition, and 10000^l. was nominated; but both *Kilvert* and the Alderman called some of them out, and upbraided them as beggars, not able to pay what had been formerly levied for the King, and at last concluded, That the King expected, and would have more yeerly then such a summe. And so the Question at last being put after long contestation, Whether they would stand out any longer against the Imposition, upon such terms, or comply with the King, in chusing and authorising a

Committee

Committee to treat of the manner of an Imposition; the Generality did chuse to comply so far, and to appoint a Committee.

That this Act of Court were not so main an Evidence for *Kilvert*, and fit to be so often insisted upon, if it were not misalleged, and misapplied; for if the *major* part of Vintners did appear, and consent, yet they were perswaded, threatned, intreated, but did neither perswade, threaten, nor intreat; and they consented to comply with the King, and did not use means that the King might comply with them, as *Kilvert* most maliciously inverts it; and their compliance was in appointing Committees to treat of an Imposition, but not absolutely to submit to it; and if they had absolutely yeelded, yet all circumstances considered, it ought not to be held a voluntary yeelding, but such a violent one, as the Sea-mans is in a Tempest, when he submits to the weather, and chuses rather to cast away all his wares, then himself, and ship, and all.

That on 22 Nov. following at another generall Court the Committees reported what the Kings demands were, and the Generalities assent being questioned, it was assented that the Committees might yeeld to 40^s. per Tun, provided that they might be assured to have from His Majestie the immunities and benefits proposed and expressed, and that all this were just and good in Law; (but indeed these words concerning legality are not entred in the Hall-book.)

That this Act of Court, if it be taken most strongly against the Vintners, though it be *Kilverts* prime engine, yet it evinces no more, but that they submitted to the Kings demands urged upon them, as hath been said; and since they had no power to hold out against it any longer, they provided for some helps to inable them to bear it, and those also no other, but such as had been proposed, and expressed to them; not such as they had greedily gaped after; the Book it self will justify in that, and indeed the benefits and immunities were inconsiderable to the Vintners, such as had no great reality in them, nor had they any beleef in the obtruders of them, nay they know they were obtruded rather to make them guilty, then to make them gainers; setting aside exemption from the rigor of Star-chamber, they

they would willingly have forgone all promised priviledges, and given great sums of money besides, to be delivered from the Imposition.

That it is extreme malice and falshood in *Kilvert* so to alledge and mis-recite this Act, as if it had no relation to former violence and constraint ; or as if it amounted to a meer request, nay to a Project in the Vintner ; as if his end had been to oppress the Cooper, and to Monopolize the retayling of Wines thorow the whole Kingdom ; or as if the words did testifie of the Vintners demands, and propositions, and requests, and not the direct contrary.

That the Vintners are not destitute of further answers also ; For first, the major part, and better sort of drawing Vintners were not that day present at the Hall, the businesse was so farre disaffected, and they in opposing it had been so farre wearied out and worried (as it were) by *Kilvert* and the Alderman, that they did forbear any longer to appear, nothing being there expected, but checks, affronts, and disgracefull usage, and therefore the most part which appeared that day, was of Suburbian retaylers, poor men, and such as dealt in Rundlets, and such as faction had drawn in for a good number of them. Secondly, of such as did then appear the more loud and turbulent part, carried it, rather than the major part of able and modest men. Thirdly, Those of the better sort which did give their consent, did it not with any true liking to the project, but meerly to avoid ruine in the Starre-chamber. For the shipwrack of the Sopeboylers, and others, was then fresh, and in view, and that Court had then gotten them the same repute, as a *Timariots* horse has in *Turkey*, where they say no grasse ever grows, after the impression of his fatall hoof. Fourthly, the entry of that dayes Act is much to be suspected, as well as many others, for many passages then intervened, to which the world is not now privy : for first, All Courts of generality were called by the Beadle, in the Kings name, a form of summons never before used, and had now been uselesse, if the generality, out of distaste to the businesse, had not been unwilling to appear ; and if the Alderman and *Kilvert* had not been very eager in obtruding upon the Company against their liking. Secondly, Divers other Courts were

were called both before and after the 6 and the 22 of Nov. wherein the generality dissenting and disavowing the Project, and alleaging many reasons of illegality, & inconvenience in it, no entrance is remaining therof, nor memory of any such Courts held; and yet if any such remembrances were now extant, they would testifie for the Vintners against th Projectors, and plainly discover who they were that pursued, and who that rejected the desigue. Thirdly, *Kilvert* has no regard at all to the true reciting of such acts as are remaining in the Clerks Book, but to the perverting of justice, satisfies in all his allegations. Fourthly, The Acts themselves were not alwayes rightly entred. Sometimes the Clerk was checkt and over-awed, sometimes entries were made contrary to his liking, and without his privy, some things being omitted, and some inserted, and some wrested, and mis-sensed; so that indeed the acts are more properly *Kilverts*, than the Companies. The Book sayes alwayes, that the major part of Vintners did alwayes appear, and the major part of the Apparence consent, but this was seldom so. And the major part did never consent, but with this Proviso, That the thing consented too was legall, and warranted by Counsell; but this was never entred. And upon the 25 of Oct. 1637. Committees were appointed to treat with Marquesse *Hamilton*; but the Book adds, Concerning the advance of the prices of Wines, and this is meerly suppositious. Fifthly, Many of the Vintners were practised and tampered withall, especially the meaner sort, and many of the better sort were over-powred, and born down by might and threats, and singled out from the rest. For example, Nov. 22 Mr. *Rogers*, and Mr. *Mason* being opposers of the Imposition, were not onely controlled in publike, as obstinate men, and ill-willers to the Kings servie, but it was commanded to be entred in the Hall Book, as a great delinquence, and there it still remains registred: and this being not sufficient, the same men were the same day sent for by the Beadle, to the Castle Tavern in *Pater-noster Row*, where *Kilvert* and the Alderman dined, to receive further rebuke and insolent usage: and this was for example to disanimate the rest. For Alderman *Abel*, as he was an Alderman of *London*, and Master of the Company of Vintners, and assisted with *Kilverts* infinite wiles and

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and impostures; and as he had to do with a distracted body of men of severall mindes and qualities, holding no perfect intelligence one with another; and as he was at that time of unsuspected faith, and in their good opinion, and as he had the advantage of those projecting times, and influence from some great persons of honour, and above all, the Kings name to make use of in all his pretences, had strange advantages to betray his brethren, and bring about his own purposes. Sixthly, besides disadvantages common to other Tradesmen, the Vintners were divers other wayes also liable to the lash, and obnoxious to injuries; for by the Statute, the Lords had a power to set the re-tailing prices of Wines so, as that they might undo the Vintners at pleasure, if they would not submit to the Imposition; and they did lay hold of this power to this purpose, causing them to sell cheaper then they could well afford, and that year when the Imposition was first consented too, fearing lest the Vintners should recede and retract, they set the prices lower, and raised them after, but not till all things were made sure. Moreover, to affright the Vintners further, it was represented to them, that by the Law the King might suppress all but 40 Taverns; that he had right to impose upon forein commodities, and that dressing of Meat, selling Tobacco, &c. were not undoubtedly belonging to their Trade, so that their case would be more desperate then the Sope-boilers, or the Irish planters, and these yet in Star-chamber had saln without mercie. Seventhly, all these indirect passages notwithstanding, there is scarce above one generall Court, wherein the Imposition was consented to, most of the other passages of preparing, ripening and perfecting the Project, were translated by Courts of Assistance, and at such Courts it is sufficient if 12 besides the Master be present, and the *major* part of those 12 sufficiently engages the whole Company. And it is to be noted, that it seldom happened at those Courts, that there were present above five or six drawing Vintners, and of those also, some were the Aldermans creatures: For Example, on 27 Nov. 1637. a draught of a Petition was presented, there were then 15 Assistants, of those there were onely five drawing Vintners, all the rest had given over their Trades, or were of other Trades, though
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of the Company, and many of them were liable to many other exceptions, and yet these referred that weighty businesse to be proceeded in by any three of the Committees, the Master being one, so that if the Alderman could procure any two to joyn with him, that *junto* was sufficient to dispatch all; and by this means the Aldermans house was the place, and the Alderman himself, with some of his privadoes, was the man, where, and by whom divers important matters were expedited. And at some times the Alderman alone was sufficient, for 1000^l. was given to *Kilvert*, and 3000^l. to *Marq. Hamilton* out of the Companies purse; but there is no Act of Court remaining, to shew by what authority these moneys were disposed, nor does the Generality understand any thing thereof, but that the Aldermans authority was solely effectuell in that businesse. Eighthly, *Kilvert*, the most fatall of all false-Informers, the most mischievous of all Projectors, the most impudent of all Impostors, was introduced to sit at the Vintners Hall in Court, there to act the Lyons and Foxes part, and when that grew odious to many, he was by an adoption of meer formality, made free of the Company, that he might insult and insinuate the more, and by his Mercuriall trumperies prove more fruitfull in mischief. And though he denies to have been at Vintners Hall till the creation of the Project, yet he was there often, and that before, at, and after the 22 of Nov. for that very day it was that he so upbraided Mr *Rogers* and Mr *Mason* at the Hall, and dining after in *Pater-noster Row*, exprest himself in more insolent, and taunting language. Ninthly, when the Generality was drawn together by the Kings command, they were caused ever to attend below divers hours till the Alderman and his party had framed and debated the businesse, the Generality had no share in the discussion of matters, it was sufficient for them to authorize and own what the privadoes had before discussed; and if any private man complained hereat, or took upon him to debate any thing by them resolved, he was singled out, and treated as an enemy to the King and his service; for example, *Theo. Cox* was so treated in open Court, and Mr *Roxland Wilson* was convented also before the Marquesse, and by him terrified, and taxed as the Kings opposite. Tenthly, when the Company did not appear

appear in so full a body as was thought fit by *Abel* and *Kilvert*, the businesse it self not being more displeasing, then the carriage of it, notice was taken thereof especially about *Nov. 1637.* and that the absent might be known, the names of such as were present were taken upon command; and this manifests how many wished ill to the Project, and how few were active in the consummating of it. Eleventhly, as *Kilvert* and the Alderman had too much influence in entering acts, so they had the like in suppressing and taking away all such papers and Notes, as might arm and inable the *Vintners* for a fuller and clearer defence. For example, a Petition, and a Schedule of divers unlawfull demands annexed in *Nov. 1637.* is charged upon the *Vintners*; whereas there is no copie of either remaining in the Hall-book, or in the Clerks hands, *Kilvert* must be the onely Register in this case against his Adversaries, and though they can prove, that they never fully agreed upon any Petition, and that which was presented to them, was by him altered in matters of pertinence, contrary to the liking of the *Vintners*, yet he still charges them upon his own papers, by himself penned, and by himself preserved. Twelfthly, to give instances, what slavery and treachery the *Vintners* lived under, two onely shall serve: There was 6000^{l.} to be repaid to the Company; out of this the Alderman would deduct 2000^{l.} issued for the use of *Marquette Hamilton*, and *Kilvert*, and so there was two thirds due to the Company; but they could never receive above 12^{s.} in the pound, which is not a full thirds; the Aldermans pleasure was sufficient to discharge them of the rest, and against that they were utterly remediless. And next, the Alderman being intrusted to see Counsell about the legality of the Imposition and the Farm, he pretended to be assured by Counsell, of the legality of both beyond all doubt, and yet he had contrary counsell given him.

All this almost which has been hitherto related, *Kilvert* passes over, and as if the Imposition had never bin thought on till *Nov. 1637.* there he findes out the source of it, and then he makes the *Vintners* the first seekers and plotters of it. But because in *Nov. the 6, and 22.* there is no pregnant proof that the *Vintners* solicited for the Project, nor no mention is of any Petition, till

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Nov. 27. there he layes his principall charge ; for to that Petition he annexes a Schedule, containing 11 immunities ; and these he entitles, The humble desires of the retaylers of Wines : and these are (as his words expresse) the very Project it self.

The Vintners hereunto answer :

That as the Imposition was before violently inforced till they did submit, so the Petition was now as subtilly obtruded, that they might seem to do more then submit.

That the Vintners at the first proposing of a Petition, did cry out against it, both as unnecessary, and unreasonable ; Unnecessary, because without any Petition, the King might in honour, justice, and conscience, without any Petition grant, what he had voluntarily offered for his own profit ; and if he would not, the matter to them was of little importance : Unreasonable, because they should now seem greedy of that, which they had so long withstood, and knew to be destructive to themselves, and would yet, if they might be permitted, at any rate possible, ransom themselves from.

That *Kilvert* hereupon assured them, that the Petition could not ingage them in any guilt, or besmear them in any crime, that it was onely framed as best becoming the Majestie of a Prince, to whom no other addresse could seem congeable, and in that form wherein it was then presented, it did intimate the 40^s. per Tun, demanded by the King, and the other immunities offered to the Vintners without any seeking, or solicitation on their part, and the Kings promise was the ground of its prayer.

That *Kilvert* intending, as it seems, to pull out the hot Chescnut out of the fire with the Monkeys paw, rather then his own, as the crafty beast did in the Fable, did neverthelesse alter the Petition to the inverting of the sense of it, and that contrary to *Mr. Shaws* advice, and did new transcribe it in contrary words, leaving no Act thereof in the Clerks book, to testifie the effect of it ; nor do the Vintners yet know whether it was ever presented to the King or no, or what reference it had, or how far that reference was pursued.

That this Petition therefore, and its appendant Schedule, ought not to be esteemed as the act of the Vintners, but as *Kilverts*, nay as *Kilverts* criminous act, being no lesse then Forgery, and

and that of a mischievous nature; the Vintners thereby being not onely drawn into damage, but crime also.

Another thing alleaged against the Vintners, to make them guilty of projecting this Imposition, is *Griffiths* Letter in *Feb.* following.

But to this the Vintners answer:

That *Griffiths* Letter giving instructions how to manage the Farm, could be no contrivance or projection of the Imposition; for *Kilvert* himself says, that he was not at Vintners Hall before the Project was petition'd for, and concluded; and it is manifest, that he was at the Hall in *Nov.* before, and therefore this is a meer contradiction, wherein he confounds times far distant, that he may thereby confound things as farre different. That which had been the laborious businesse of so many yeers before, and the task of so many great Councillors of State, and the designe of so rare an Engineer as *Kilvert*, and had been brought to such maturation before *Feb.* cannot now be attributed to *Griffiths* Letter, dated in *Feb.*

2. But *Kilvert* sayes, That the Vintners were not onely the inventers and projectors of the Imposition, but in the second place, they were also many wayes actors and prosecutors of the same, viz. by Farming it, by sealing the *Quad:* Indenture, by taking 1^{d.} and 2^{d.} per Quart, above the just prices, &c.

The Vintners answer; and first, as to the Farm:

That the Farm of the Imposition for 8 yeers, was obtruded upon the Vintners, not for that it was likely to prove beneficial to them, but for that they were the fittest men to bring in the Kings Rent, and could collect it with the least noyse and disturbance in the world, and with least opposition and violence amongst the Vintners: for if the Kings Rent had been to be demanded and exacted by his own immediate Officers, or by any other Tenants and Farmors of any other Trade, the Vintners Cellars must have been searched by strangers, and many occasions of tumult and strife must have happened, whereby great amours and troubles might have been raised in the Commonwealth, to the greater scandall of Projects. And the same was apparent in the Sope-boylers case; for whilst that Project was managed by strangers, and the old Sope-boylers would not com-

comply, the whole State almost was shaken with the out-cries and distresses of many undone Families, and the Projectors gained lesse, and vexed the subject more.

That as the example of the Sope-boylers case thriving so ill till the old Company did submit, was a motive in *Kilvert*, to presse, and by force to drive the Vintner the more to a submission, so the example of the Sope-boylers case, the old Company suffering so much, and groning so long under such grievous things till it did yeeld, was a motive to the Company of Vintners, to make them yeeld the sooner: and therefore, upon the 1st of Feb. 1637. after some contestation notwithstanding; and after it had been opened, that Sir *Abraham Daws* had offered above 40000 *l.* for it, the question being put to the Generality, Whether they would farm the Imposition at 30000 *l.* per annum, they did consent thereto; and for the Kings further satisfaction, since he would not contract with the Generality, they did agree to nominate 10 Contractors.

That they were first advertised, notwithstanding that the meer renting of the Kings Imposition was not contrary to Law, nor could they imagine, that since the State would be less grieved and perturbed, if they rented it rather than any other men, it could be held any disservice, either to the Subject, or the King.

That if any miscarriage were in the manage of the Farm that is wholly to be ascribed to Alderman *Abel*, and some few of his privadoes, who did ingrosse the whole power therein, to the benefit thereof to his sole use, and admitting some Farmors or sub-farmors to bear the name thereof, yet they had, nor enjoyed nothing else but the meer name; and if they were admitted for any purpose at all, it was to bear losse and blame, and to countenance the Aldermans tyranny, or to be responsible for his injustice, to this purpose they were more than nominall, titular Farmors, but to all purposes of benefit they were shadows, phantoms, and meer empty Names.

That the Vintners expected no benefit from the beginning to arise to them out of the Farm, nor could hope for any other dealing from the Alderman, then what they found; for they knew well, that if Sir *Abraham Daws* had offered more than

40000^l. and was refused, it was not out of any favour to them, but out of some other end upon them. And they had some cause to fear, that if it proved a bargain of profit to the Farmors, the Rent being once settled by their compliance, the King might avoid his grant, and if it proved a bargain of losse, then their own deed should be strongly urged against themselves: and howsoever it proved, they knew the Alderman would have the shuffling, cutting and dealing, all in his own hands; and that they should have, nor Law, nor right, nor remedy, besides his meer pleasure and discretion.

That the Aldermans trains and traps from the beginning, were very grosse, and rank, and obvious to the dullest capacities; for though the Patent of the Farm were not sealed by the King, nor did commence till Midsummer after, yet he had chosen himself Treasurer, and taken a house, and settled Officers, and salaries, and removed his habitation before Lady-day. And though this businesse of the Farm was no such adventure as did require any stock at all, or bank of money, yet for other sinister ends, he demanded no less then 30000^l. to be undertaken for by the farmors, and a good considerable part thereof he did gather in, and receive into his own hands, and divers men being therefore unwilling to come in as undertakers, he used extremities to draw them in: For example, Mr *Leechland* being fearfull, and unwilling to undertake, he was forced and hunted in by the Alderman, and that place which he held under the King, was threatened to be taken away; and he had not undertaken any thing in the Farm, had it not been for fear of losing his place: And for another Example, Mr *Rowland Wilson* was as much solicited to come in for an adventure, but refused, and could never be won by any means whatsoever to joyn in the Farm.

That the 7 Allegations set down in the Aldermans paper, whereby he would prove the 10 Farmors, and the 27 Subfarmors equally interested in the Farm with himself, are not sufficient to prove the same.

For first, the Act of 29 March, 1638. does not prove, that his office of being Treasurer, and his stipend of 500^l. per annum was settled by the Company of Vintners, when it is evident, that he had taken a house for that purpose, and removed from

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Billetter-lane, and settled all things before Lady-day.

Secondly, the bringing in of 100 *l.* for every undertaker, when the adventure required no such supply, can manifest nothing but the Aldermans tyrannie and treachery: and for the 30000 *l.* he subscribed mens names as he pleased, they themselves did neither condition to be ingaged for such sums, nor did they underwrite to such conditions, and the truth is, that money which was gleaned from the 37. though it was intended by the Alderman, as a hook to hold them in, and ingage them the faster; yet nothing was pretended, but a meer loan, and therefore the Alderman paid them Interest according to their severall proportions, although he gave no Obligations for the same.

Thirdly, the *major* part of Undertakers were not present, or consenting to the choise of Alderman *Abel* for Treasurer, and they which were present, and consenting (besides some of his own privadoes) were but lookers on, and did but onely agree to that, which they had no power to frustrate.

Fourthly, those of the Adventurers, which did ride about to settle the Imposition in the Country, and in the Out-ports, did it in obedience to Warrants from the Lords of the Councell, and to the Aldermans commands; and though they were spectators, or assistants, yet they did but execute the Aldermans and *Kilverts* Instructions, and were as meerly instrumentall to them, as they seemed to be to the King; for Example, *Kilvert* rode to *Bristow*, and other Western parts, and though he went attended with some others of the Undertakers, yet he, as from the Kings own mouth, took the boldnesse to treat with all men, and that in very imperious terms; and when all his intimations from the King would not prevail to make *Bristow* men, &c. submit, he at last threatned them with the Star-chamber, and detected them of false Measures, and so as a meer Informer, reduced them in the end to subjection.

Fifthly, those Acquittances which some of the Adventurers signed, have words in them inserted by the Alderman, meerly to confesse a Partnership, and an equall interest in the Adventure, without which, the Alderman would not restore them their sums adventured, do signifie nothing but the Aldermans craft
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and injury ; for it was after a Parliament summoned, and as he drew the Acquittances for his own safety, so some of the Adventurers perceived his aim, and would not sign the same, but chose rather to leave their money still deposited in his hands.

Sixthly, those 34 Farmers which did consent to the buying in of the Wine-licenses on 15 Nov. 1639. were drawn in, and cozned by the Alderman, for he had bought them before, and found losse in them, and now by his uncontrollable power he would force them upon his pretended Partners; and at the same time he arrogated a right to himself, of turning out all such as would not joyn therein, and did use threats to the same purpose.

Seventhly, that Petition which was drawn upon the approaching of this Parliament, and signed by 28 of the Undertakers, for the discharging and rendring up of the Farm, was framed chiefly for the Aldermans impunity, and he was the Author, and Solicitor in it to draw in others; and by his means it was also moved at the Hall to the whole Company, that they would concur in the same, and it was to this intent, that they might seem as much interested in it as he, and he as little guilty as they.

That all these shifts and wiles of the Alderman and his faction make it very cleer, that the ten Farmers, and their under Farmers were not so in truth, but meerly Nominall, that they might suffer for and with the Alderman, if any hazard or question were; for the Alderman made a great benefit of it: and being indebted, and of weak estate before, by this Farm he hath got a great estate, and enabled himself for one purchase of 17000^l. whereas the Farmers and sub-Farmers, never received one penny benefit, nor had any account given them in so long a time for it, nor had any assurance in Law, under hand or Seal, whereby to call him to account, or to recover, or claim any thing upon account. And as the Alderman did in Law keep all the power in his own hands, so in fact also he did exercise that power after an arbitrary unlimited way; at some times he openly told them, that they had no right nor interest in the Farm, but at his meer discretion and pleasure, and that he could turn out, or take in, as he listed; and at other times he did, upon

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private displeasures, put out, and lessen some in their shares, and, upon fancy, put in, and raise others; and all these things were transacted at his own house, by his own authority; and that was so unquestionable, and uncontrollable, that no man thought fit to stir, or move any thing against it.

That as all this and more may be maintained in defence of the Farmors, so more yet may be maintained in the behalf of the 27 sub-Farmors; for the 10 Farmors did some things without the knowledge of the 27, and have since exhibited a Bill against the 27, to make them liable to some moneyes disbursed by them, but they are over-ruled, and left remediless in the case; and the 10 were first drawn in and worked upon by the Aldermans craft; and they being the richest men of the Company, the Alderman could not so easily have effected his ends, nor deceived others, if he had not first deceived them.

The next thing pressed against the Vintners, to make them guilty of the Imposition, is the sealing of the *Quadri*: Indenture, and agreeing to the unlawfull covenants thereof.

The Vintners answer hereunto, is;

That they having with great reluctance yielded their backs to the sore pressure of the Imposition in Nov. 1637. conceived, That a sufficient consummation of that affair, and hoping that the King would thereupon provide for their delivery out of Starre-chamber, and an open liberty of their trading, did not see cause to seek for any further Deeds or Covenants to be drawn, from them to the King, or from the King to them, much lesse from either to the French and Spanish Merchants.

That it was the onely policy of *Kilvert* and the Alderman, to have recourse to Petitions or Indentures; for as they had taken order for their own benefit before, in drawing the Vintners to an involuntary submission in Nov. so now they would take order for their impunity, by drawing further acts of more voluntary submissions, in shew from the Vintners; before they had engaged onely their tongues, now they would engage their hands and Seals, and leave them no retreat: before they had made them stoop to the Kings ends, now they should seem to intend onely their own; for it was now represented, that their grant to the King was sure and perfect, but the Kings grant to them must require

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quire further ceremony in Law, and supplication besides. And by this means the Vintners were to be made, not onely losers, but culpable also, and the Projectors having first taken the Vintners bread, to put it into their own mouthes, now take out the thorn also out of their own hands, to thrust it into the Vintners.

That upon 15 *March*, 1637. when the Covenants concerning the Merchants were first proposed to the Vintners, they were cryed down as unjust, and prayed against, and were not till the 21 of *Mar*: settled, and that by the interposition of the Lord Treasurer, Marquesse *Hamilton*, and the Attorney General.

That notwithstanding the unapproved settlement, no draught of the *Quad*: Indentures were shewed at the Hall to be examined and scanned till long after, neither was the Company ever fully satisfied therein, or knew if any true copy thereof was produced, or how it was after altered; nor did they agree, till the 16 of *June* following, that their common Seal should be taken forth, and set thereto; nor do they know whether it was set thereto, or by whom, or when.

That the *Quad*: Deed, bearing date the 19 of *June*, 1638. was not sealed by any particular Members of the Company, till *Sept*. following, and then those which did seal it with their private Seals, were drawn ignorantly to the Attorneys chamber for that purpose, and perswaded to it by the Alderman, as a thing of meer form, and of no dangerous consequence at all: and since it had commenced, and taken effect before, they do not yet know what vigor their seals superadded to it, or to what purpose their seals were required, except it were to make them criminous, contrary to the Aldermans fearfull oathes.

That since the *Quad*: Indenture did not occasion or precede the Imposition, but was occasioned, and preceded by the Imposition, and since it was in part compulsive, and an effect of those calamitous, irregular times; and since the Aldermans fraud was so notorious in it, hee putting in the names of whom hee pleased, and some of those also having yet never sealed, and he having the common seal of the Company in his sole custody, and kept the same a long time after Midsummer, when another Ma-

ster was chosen in his place; The *Vintners* hope to be excused, if not a *Toto*, yet a *Tanto*.

That since the same Indentures were drawn also by the Kings Councell, in whose judgement and responsibility, the *Vintners* had reason to confide; and since they were urged upon the *Vintners* for the Kings advantage, or the Merchants, and not sought for by the *Vintners* for their behoof: and since the *Vintners* grant to the King, could not entitle him to any undue thing, or prejudiciall to any but themselves: and since the Kings grant to them, as to any unjust purpose, might be avoyded at pleasure, and was known to be voydable: and since there was no aim in the *Vintners*, to obtain any thing from the King but due impunity, and liberty of Trading: and whatsoever was thrust in further, was onely to make them guilty, and plotted and acted meerly by the Projectors: and since the *Vintners* never did enjoy more than a free Trade, and exemption from ruine in Starre-Chamber, but were rather hindered in their Trade, and discountenanced after: and since it is manifest, That the Projectors in all those inserted illegall Covenants, had never any respect to the good of the *Vintners*, or intent that they should enjoy them; They humbly, yet cheerfully, submit herein their Case to the censure of all good men.

The next thing objected by *Kilvert*, as an execution and pursuance of the Project, is, The taking of 1^d. and 2^d. per quart by the *Vintner*, upon the consumption of Wines: and this is charged as an exaction, and iniurious to the Subject.

For answer hereunto, the *Vintners* say,

First, That the necessity of those times was so irresistible, that without taking 1^d. and 2^d. per quart, they could not Trade; and without Trading they could not subsist, for the Imposition was exacted at the Custome-house; and without paying it, they could get no wine, though they would have resisted it; and the question was onely, whether they would take the advance in the retayl, or starve themselves and their families. And the *Vintners* can make it appear, That the Shipscot was not drawn on with more violence and subtilty, nor no project, then this; and yet if all delinquents in all such violent and subtile projects, were

were now questioned, it would shake the foundations of the State, and disturb the common peace.

Secondly, that they never took for their Wines, but according to the prices set by the Lords, and that such taking is justifiable by the Statute; for if any injury thus was done, it was done by the Lords, in setting the prices contrary to the meaning of the Statute; and to do this, the Lords were not solicited by the Vintners, nor can they conceive it to be, by so inconsiderable a Company, or to have any respect to the benefit of such a poor Incorporation. But it is manifest, that they respected the Kings benefit, and were officious therein, and that much against the Vintners will, and that thereby they had a great power to effect their ends, and did thereupon strain their power to effect the same.

Thirdly, the Vintners were not so far favoured by the Lords, though the Imposition was submitted too, but that they suffered hindrance, and losse notwithstanding, and the prices of Wines were set, as if there had been no Imposition laid upon the Vintners; but this point falls in with the third branch of *Kilverts* Charge, and therefore is to be more fully opened, and answered in the next place.

3. In the third place therefore, whereas *Kilverts* charge is, That the Vintners did project, and seek the Imposition for their advantage and profit, and did reap great profit and advantage by it.

The Vintners make answer:

That many things reckon'd up by *Kilvert* as immunities, and benefits of the Vintners purchased by this Project, were their Birth-rights, and legall Interests, and had been due to them without any Imposition: For Example, the Coopers incroaching by fraudulent brokerly Offices betwixt Merchant and Vintner, and Ivie-like sucking juice out of both, without any root of their own, were to be restrained of common right. So the dressing of Meat, selling of Tobacco, exemption from the extrajudiciall Decree of Star-chamber, the restitution of 6000^l. lent to the King, &c. were appertaining to their Trade, and due by the Law of the land; and if no Imposition had been, they ought to have been enjoy'd without question or molestation.

That

That the taking of the Farm, the restraining Merchants to sell to any except Vintners, the dealing in Wine-licenses, yielding to the Imposition of 40^s. per Tun, &c. which *Kilvert* recites, and priviledges and benefits sued for by the Vintners, were indeed no way beneficiall, nor sued for, nor at all obtained by the Vintners, though the contrary was pretended in all.

That whereas *Kilvert* affirms, that the Vintners have gained by the Project above 200000^l. arising to them three severall ways; viz. 1. By beating down the Merchants prices. 2. By the advance of 1^d. and 2^d. per quart, retailed. 3. By selling Malagoes and Sherries for Canaries. To each of these particulars; and first, as to the first they reply :

That the Vintners (to give a true relation of things) being much incited, and forced to submit to the Imposition, amongst many other Objections used this as one.

That they being loaded with the Imposition, could not sell so cheap as others, and by that means all Noblemen, Gentlemen, and others, would buy of Merchants and Coopers, and not of them, as formerly; and so a great part of their Trade and gain would fall away. To salve this, the Kings Agents answered, The Merchants and Coopers shall be bound up, and shall sell to none but you. But as this was offered to the Vintners, that without utter ruine they might submit to the Kings benefit, and not desired by the Vintners out of any covetous desire to enrich themselves by other mens losse, so it was but onely offered, and never intended, or faithfully performed. Howsoever, the Merchants (by the advice of *Roger Kilvert*, Brother to our main Projector) were so politick, as to pretend, that this restraint, or rather umbrage of restraint, was unequall to them; and therefore to ease them in this particular, a remedy was invented by obtruding a *medium* of 5000 Tun French Wine, and 4000 Tun Spanish yearly, upon the Vintner at such high rates for in favour of the Merchant, to the great disadvantage of the Vintner.

That on the 15 of *March*, 1637. at a generall Court this *medium* Project was proposed; but the out-cry of the Vintners was, that it could not take place without generall discontent, inconvenience, confusion, difficulty, and disturbance of Trade

and therefore they humbly prayed against it, as in the Hall-book is *verbatim* registred.

That the Project being hereupon much indangered after so fair a progression of it, upon the 20 of *March* the Lord Treasurer, Marq. *Hamilton*, and Sir *I. Banks* then Attorney generall, convented some of the Merchants and Vintners before them, and then regulated the Vintners, to admit of the *Medium*.

That upon the 21 of *March*, the same was discovered to the Generality, and their consent was obtained, although their opinion thereof was nothing altered, for being so snafled and muzzled as they now were; it had little booted them to reject so potent an Order. And the Merchants could not conceal what advantage they had hereby over the Vintners: For Example, a Merchant in derision to the Vintners complaints, answered; The Vintners are free from the Star-chamber, and are now the Kings white-boys, and shall the Merchants injoy nothing?

That the *Medium* in it self was a great, and violent pressure, but it was abused by craft, it grew intollerable. The inconveniences of it self, were;

First, that it necessitated the Vintners to buy too great quantities of Wines from the French and Spanish Companies: for by this means the Vintners, whose Primitive undoubted right it was, to trade as Merchants, and had been in suit about the same, were now defeated of that Trade, they being now scarce able to vend, and retail so much as their *Medium* proportion extended to.

Secondly, that it injured the Vintners in the prices and goodnesse of Wines, for the Merchants before were allowed to sell at such rates, but the Vintners might bargain at pleasure, they had an open and free Market, and commonly they bought under the prices set, and they pleased themselves with a free choice; whereas now, the Vintner is confined to a *Medium* price, as well as a *Medium* proportion; and as the Merchant is allowed to sell, so he is constrained to buy; nay, if the Merchant will needs require more, the Vintner must needs rise accordingly.

That the cozenages and abuses of the *Medium*, were yet worse then the *Medium* it self; for under colour thereof, the Vint-

Vintners were deceived in the quantities of Wine : For Example, sometimes having bought of a *Medium* Merchant so many Tuns, and hoping thereby to be discharged of their *Medium* proportion, the Merchant would neverthelesse pretend, that the Wines were none of his, that he was but intrusted to sell them as a Factor for another, and so this was no discharge for the *Medium*.

Secondly, other Merchants which were not of the *Medium* contract, would get the *Medium* Merchant to patronize and sell their Wines, and so under that pretext, the Vintners were forced to take off small Wines at the *Medium* price, which otherwise they might have bought cheaper.

Thirdly, by this means there was no end of the *Medium* proportion, for whatsoever quantities the Vintner took from the Merchant, the Merchant still complained, that his proportion was not taken off, and the Vintners for want of true intelligence, and correspondence amongst themselves, were not able to evince the contrary.

In the next place also, in the qualities of Wines, the Vintners were further damnified by this *Medium* contract; for no vendible, merchantable Wines might be refused from the Merchant by the vertue of the contract, and all Wines almost were admitted good according to the contract : Whereupon it happened, that the Vintner was forced to take too great stores of course Wines to satisfy the Merchant at excessive rates, and yet in the mean time to satisfy customers with richer Wines (Wine being a matter of meer pleasure) he was of necessity to provide other store, of better Wines at an extraordinary rate.

And in the last place, though this burthen of the *Medium* was introduced to gratifie the Merchant for his restraint, and to ballance in the Vintner the priviledge of suppressing the Coopers, and some other priviledges; yet neither was the Merchant restrained, nor the Cooper suppressed, nor any other promise intirely performed; so that the very pretences of ease proved in the end burthens; and the promises of helpe, troubles; for the greater load being once laid on, the staff presently which should have made it the more supportable, was taken away, or denied. The Merchants did sell, nay (as they were able) did under-sell

t) Noblemen, Country Vintners, &c. more commonly then before. The Coopers got Tickets from Alderman *Abel*, and thereby passed for petty Merchants; and having gotten Tickets for once, they made the same serve for many times, and sometimes without Tickets at all they sold Wines by stealth, and they did not alwayes deal by whole sale, but sometimes in Rundlets, and serve Funerals: and all this after the Vintners had taken off a great quantity of ill Wines at a great losse from their hands, upon an agreement that they should relinquish that Trade for the future. And at all this Alderman *Abel* did connive, and as is probable, made a great advantage by it; being in that respect more inexcusable then *Kilvert*, who having a Brother of the Merchants Company, and not being himself a Vintner, as the Alderman had been, may be held lesse blameable. But to shut up this point, *Kilverts* own words are in print; when the *Medium* seemed grievous to the Vintners, he himself took a journey to *Barwick* for them, and there obtained order and direction from His Majestie to the Lords, to ease and discharge the Vintners of it, which was done accordingly: and hence it seems, the Vintners, if they had gotten 60000 *l.* in three yeers, by rating down the prices of the Merchant (as he before suggested) or had had any advantage against the Merchant, they had been very inconsiderate, in sending him to *Barwick*, and giving him 1000 *l.* to deliver them from such a profit.

The second gain of the Vintners (as is suggested by *Kilvert*) is in retailing at 1^{d.} and 2^{d.} per quart, dearer then the usuall price of Wines, and by this advance upon the consumption of of them since *Midsummer*, 1638. when the Vintner first retailed at 7^{d.} and 14^{d.} he sayes the Vintner has gain'd above 130000 *l.*

The Vintners answer hereunto contains five things very considerable; but our stumbling block had need be first removed.

Kilvert in all his accounts, speaks of so many Tuns of French, and so many of Spanish, and yet the Vintners buy Spanish Wines by the Butt and Pipe, which are but half a Tun; so that a Pipe of Spanish Wine is equivalent to a Tun of French, and is commonly as long in drawing, and as much stock is imploid in the one as in the other, and setting aside that a Butt or Pipe takes not up so much room in the Cellar as a Tun, there is little

the difference to be observed: and therefore the *Vintners* gain ought to be alike in both, and *Kilvert* ought not to pretend, as if the *Vintner* bought of Tuns alike.

This being premised, the *Vintners* first answer is;

That *Kilvert* does most untruly compute from all Wines bought in by the *Vintner*, to all uttered by them, for the *Vintner* sells not by the quart above two parts of three commonly of Wines bought in grosse, and a full third he sells to the Country *Vintners*, and others, as he buyes in grosse, and sometimes his benefit is small, and sometimes none.

The second answer is, That the Charge of retailing *Vintners*, is far greater then of other Tradesmen, for in the retailing of 1000 l. or 1200 l. *per annum*, there is necessarily required at least 300 l. charge, and yet other Trades will retail more with half the charge. And experience in this, is a demonstration sufficiently convincing; for if there be in *London* 500 *Vintners*, there are not above 40 of them rich men, the greatest part by far is poor and indigent, and the *Merchants* themselves have attested this before the Lords of the Councell, and the Honorable Committee; witnesse Capt. *Royden*, &c. This is an Argument, wherein no errour can be, and which will admit of no answer.

The third answer is, That drawing *Vintners* are subject to many casualties and misadventures in their Trade, many times Wines decay upon their hands, and leak away, so that sometimes they sell to *Vineger-men* and Distillers, and sometimes retail at losse.

The fourth answer is, that Retailers are often constrained to give more for Wines, then the prices set by the Lords; and of late yeers they have given more for French Wines, by 3.4.5.6 l. *per Tun*, then the rates set; and for Spanish, 10.20.30 s. a peece extraordinary.

The fifth answer is, That since the Imposition, as the retailing price has been advanced for the *Vintners* benefit, so the *Merchants* price in grosse has been advanced also to the *Vintners* hindrance as much: so that since the Imposition, the *Vintners* condition has not been bettered: For Example, in 1636. and before that yeer the *Vintner* bought Canary at 17 l. *per Pipe*, and sold at 12 d. he bought Sacks at 15 l. *per Butt*, and retail'd at 10 d.

10^d. but in 1637, 1638, &c. he bought Canary at 19 *l*. and Sacks at 17 *l*. so that if no Imposition had been then levied, yet the retailing price ought to have been advanced. French Wines also have been of late more scarce and dear; and therefore in 1634, 1635, 1636, &c. the Vintner bought the best Gascoin Wine at 18 *l*. per Tun, and smaller Wines at 15 *l*. and then the selling price was 6^d. per quart; but the buying price now for the best Wines, is 19 *l*. per Tun, and for the smallest 17 *l*. and yet the selling price is but 7^d. So the set rates have been, and yet the Merchants have often sold above those rates also: For Example, Mr *Wilcox* has bought Canaries of *Joger Kilvert* himself (the supposed Projector of the *Medium*) at above 20 *l*. per pece, and was fain to pay down the money required above the *Medium*, as a fine before hand; and many the like Examples might be given. And whereas it is reckon'd by *Kilvert*, that 1^d. per quart is answerable to 4 *l*. per Tun, this is most untrue; for by reason of want of Gage, Lees, Leakage, and other misfortunes (admitting that Wines do not change, or sour) the Vintners cannot draw above 220 gallons; so that in respect thereof, no lesse then 1 penny in 4 can be allowed the Vintner. For note, that in a Tun of French Wine there ought to be 252 gallons. And note, that though Sherries are commonly full gage, yet Malagoes and Canaries are under gage, and every Pipe wants 8 gallons of full gage, besides as much Lees, and besides the damage of Leakage, &c.

Note also, That though some rich French Wines want not of gage, yet the smaller Wines want 20 Gallons; and high Countrey Wines, which are the richest of all, want so much of gage, that a Tun is not above five Hogsheds. In this therefore Capt: *Langham* did ill to abet *Kilvert*, and he is most easily to be disproved: and all these losses also to the Vintner mentioned, are such as come along with his Wines when he first buyes them, and are over and above casualty at home in his own Celler. So then supposing 3^d. answerable in the Tun to every 1^d. raised in the quart, and to give account of that 3^d. The Vintners say, that there was 1^l. new Imposition taken by the King at the Customhouse, before the same which Sir *Abram Dams* farmed; and that by this new Project since 1637. 2^l. more also has been taken

By the King, besides what the Merchants have advanced in their price, partly by reason of Impositions set in *Spain*, and partly by the dearth of Wines in *France*; and so for divers yeers last past, the Vintner in very truth, has been but a meer drudge to Proiectors, employing himself, his servants, and estate, to supply the Common-wealth, either for losse, or no considerable profit.

The third way of gain to the Vintner, which *Kilvert* calls a super-project, is, By selling of Sacks and Malagoes at the prices of Canaries, the gain whereof is 12^l. per Tun extraordinary; and this way since *Feb. 1637*. The Vintner, as *Kilvert* pretends, has gotten 30000^l. and his brother *Roger* in this, is his faithfull abettor.

The Vintners, in the first place, refer themselves for answer hereunto, to the competent proofs of their accusers, desiring only, That the same kennell which was once produced, and disproved before the Committee, may no more be admitted.

And in the second place, if proofs fail on the other side, they shall make it appear on their side, That few Vintners in *London* vent any considerable quantities of Sherries or Malagoes by retayl. A great number of them may safely depose, That they scarce draw 4 Butts of Sacks in a yeer.

In the third place also they say, That those Vintners which do deal in any considerable quantity of Malagoes, and Sherries, do for the most part, buy them for the Countrey Trade, and utter them again in grosse, at a very small encrease of profit.

And fourthly they say, That such as drive a Country Trade, do not usually send down their Sacks in Butts, as they buy them, but in Graves Hogheads; and it is very certain, That 2 Butts, viz. of Canary or Malago, will but little more than fill 3 Hogheads, being Rackt; and after this account, the price of a Butt of Sack, set at 17^l. and a Hoghead being sold at a 11^l. Two Butts are bought at 34^l. yet in three Hogheads yeeld but 33^l. so that were it not for some bargain sometimes under the prices set, the Vintners might sell at losse. For example; *Tho. Dudley* justifies, That from 1637. till 1640. he has sold in grosse to Countrey Vintners 250 Tun of French Wine, at 5^d. per quart, and under; and 180 Tun Spanish, Canaries, not above 12^d. and Sacks, not above 11^d. per quart, besides many losses by trust, &c. and for this,

this, his Books of yearly Accounts, will be sufficient evidence. And many more like examples may be alleadged.

And here let it now not be omitted, That *Kilvert* has divers other generall wayes of blinding and puzzling such as are not knowing in the Vintners mysteries ; for first, he charges all Wines imported at the Custome-house by Merchants, as bought by Vintners, although he cannot be ignorant that Coopers, Merchants for other Countreyes, *Aqua vita*. men, Gentlemen and others, do vent and buy at least a moiety of Wines imported, the Vintners scarce compassing the other moiety.

Secondly, He allows and deducts 15 per cent. for leaking at Sea, &c. but he conceals the great quantities of Lees, which, many times, the Merchant pours out of one leaky vessell into another, and sells for near to the Vintner.

Thirdly, He makes no allowance for leakage, or other mishaps incident to Vintners in their own Cellars.

Fourthly, He passes over want of gage, as a thing scarce worth mentioning, thinking it sufficient to say, That the richest French Wines are commonly full-gage : but the fallacy of this hath been discovered.

Fifthly, He insists upon the late cheapnesse of Spanish Wines, and yet they were scarce ever dearer before the Imposition, but in the mean time passes over the great dearth of French Wines ; for the truth is, Spanish Wines have not been so cheap as to make the Vintner whole for the dearth of France, but the dearth of France has been so great, as to devour all profit by Spain, and more.

And here it may be noted, That the old rates was about the beginning of K. Char: that the retayling price of French Wines were set at 8^d per quart, when the Merchants prices were no higher than now, or of late, since the Imposition.

To draw now to a conclusion ; since the Vintners can make it so visible to all that their Company (excepting some few of them) is poor and necessitous ; and that this Project for these 3 or 4 years last past, has impoverisht and impayr'd them more than formerly ; and since they have so satisfied the Honourable Committee therein, that Master Green has confest it to be the opinion of the whole Committee, they desire that it may be duly

ly weighed, for the Vintners have not onely suffered much by this Project, but they knew long before, that it could bring nothing but losse and hazard upon them, and that was one cause why they opposed it so long; for if it had been meerly illegall, and not very detrimentall also, it cannot be imagined that they should with so much stoutnesse and constancy, and hard endurance have stood out against the violence of it so many yeers together. They desire also that their Case may be warily severed and unfolded; if they have been delinquents, let them be fined as delinquents, according to the just weight of their severall delinquencies: if they have been gainers by the Project, let them make restitution according to their severall gains: but when they are not prosecuted as delinquents, nor believed to be gainers, let not *Kilvert*, without assigning what third way he will require it, challenge from them 200000*l.* in grosse. Let it also be considered, That it is impossible in nature for any humane judgement exactly to descry, amongst all the Vintners, who were the greatest delinquents or gainers: and their Cases being different in both, no one indifferent sentence can justly involve all alike in both: if they have been delinquents, it shall be confessed, that they may be punished, though they are no gainers; and if they are gainers, restitution may be demanded, though they prove no delinquents: but let not both those terms be blended, as if in this case they were inseparable. Howsoever, if necessity, and force, and fraud so extraordinary shall not excuse the Vintners, as it does almost all the Kingdom in the Shipscot, and other late projects, if the calamity of those times shall not acquit them which consented to the Imposition, &c. yet all did not consent alike. Some were more active, some more passive: a great part was not at the Hall, but had iust cause of absence, when any illegall thing was proposed; and a great part being present, were concluded by the maiority of other men votes, and a great part of Voters did most unwillingly vote for fear of ruine; and yet all these are not equally culpable, nor yet now possibly severable. So also if the Project be held gainfull, yet it could not be gainfull to all alike, for all Vintners do not trade in the same quantities; nor do all, trading in the same quantities, finde the same gains coming in by their Art and Industry,

dusttry, nor the same blessing of God prospering them in both : and yet in this case, justice ought to proceed with equall respect had, as well to Geometricall, as to Arithmeticall proportion. And as for the second part of the Accusation ; it cannot be doubted, but that the chiefe authors, are to be accounted the chiefe actors also in the businesse. It is not so difficult to bring a horse to any obedience, and to the endurance of any load after he is once thorowly broken, as it is at first to break him : and this *Kilvert*, &c. found true in the Vintners ; for after he had once prevailed, that they should not resist the Imposition any longer, by the same power (and lesse) after, he might make them beg for it, and seem desirous of it ; nay, in shew, contend for it : yet still this shews them the more servile and oppressed, and him the more tyrannous and uniuert.

This might suffice for the three branches of *Kilverts* Charge : but it is evident, That he is not an Accuser onely, but a Calumniator also. He speaks of divers arts, whereby the Vintners sophisticate, and adulterate Wines ; he mentions Saw-dust of Deal, Bilberries, and the like, as used by the Vintners, to corrupt and falsifie Wines, or to put off Wines corrupted and falsified : if this be true, he ought in iustice to the Common-wealth, he ought out of iustice to Justice it self (whose eyes he now seeks to blinde) to reveal the same ; and the persons offending, and the times, and certainties of each offence : but if it be not true, he ought to confesse himself, to be himself ; that is, a professed perverter of Justice, and enemy of Truth. Whilst the High-Commission tyrannized, there was no fitter Blood-hound than *Kilvert* to be officious in that Court ; yet even in that Court he was found too corrupt, too libidinous, too treacherous ; many Articles were exhibited against him, and at last he was reiected, as a person infamous, and scandalous to Ecclesiasticall Jurisdiction. His next Scene that he entred upō, was the Star-chamber ; and for a good season, he playd there the part of a rare artist ; and having given admirable proof to the world of his exquisite skill in producing Deponents, and managing of Oathes ; he left it at last, uncertain, Whether that Court contributed more to his preferment, or he that Courts ruine : but the wonder of all is, that he dares yet appear in Parliament with any confidence, or in a time

of Reformation, publish such accusations as he does, wherein there is no one entire, solid truth; nay, nor scarce any parcell of truth, which materially tends to his own justification, or to the Vintners confutation. Since the depending of this Case, some witnesses have been produced by *Kilvert*, or his brother *Roger*, or both, to depose against Mr. *Gardiner*, and many other Vintners, that they sold all their Sherries and Malagoes at the prices of Canaries. These were disproved before the Committee, and indeed by their deposition, they must have known that in the Vintners Cellars, which the Vintners themselves could not possibly know. In one Pamphlet also *Kilvert* moving the House to retract their Votes concerning his guilt; He is bold to move them to it the rather, because of the 200000 *l.* which he hopes to recover out of the Vintners, as if this could be any motive to such iust Judges: and at another time he is not ashamed to reckon up his good services, and merits to the State. But sure, though the man forgets where he is, or to whom he speaks, his Judges cannot forget who he is, and what he alleges. Of *Roger Kilvert* nothing need to be said, but that betwixt him and his brother *Richard* there is a true resemblance, a lively naturall stamp of Brother-hood; and in the *Medium Project*, that his brain was the more pregnant of the two. Of Alderman *Abel*, sufficient is related in the story of *Kilvert*; he was as fit an engine for *Kilvert*, as *Kilvert* was for those rigorous, projecting times.

Sathans two great attributes are, that he is a Lier, that he is a Murtherer: lying is his means, murder is his end, when he tempts into sin, and when he accuses for sin, he is false in both, but his falshood in both ever tends to destruction. The Vintners have found both these Sathanicall attributes very eminent of late in their adversaries. The same men which first assayed them to draw them into the Project, are now their greatest prosecutors for the Project; and there was not more deceit in representing the Project legall then, then now in making it so odious; and it is hard to say, Whether greater ruine was contrived to them when they were to submit to it, or now, when they are to be punished for it.

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| II. The State of BARLEY for the Year 1737. | XI. A SCHEME for Brewing strong MALT-LIQUORS after a new improved Method. |
| III. Of MALT-KILNS. | XII. Of WORTS, and their Improvements after a new Method. |
| IV. Of FUELS for drying the several Sorts of MALT. | XIII. The BARNSTABLE Way of Brewing a Hogshead of fine Pale ALE. |
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By a Person formerly concerned in a publick Brewhouse, at London; but who for Twenty Years past has resided in the Country.

The third and last PART.

L O N D O N:

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MDCC.XXXVIII. (Price 1s. 6d.)





T H E
P R E F A C E.



HAVING been pretty full and particular in the Prefaces to my two former Treatises, on this Subject, I shall be the Briefer here; and only observe, that, as I annually Travel through several Counties in the Way of my Business, I have had the greater, and really the only Opportunity of thoroughly acquainting my self with the different Methods of Making Malts, Brewing Beers and Ales, and Inspecting into their After-management: In all which, (tho' there be still too much Reason for Complaint) blessed be God, I have seen great Improvements, especially within these few Years, which, as they were very much wanted, and of great Importance to the Nation,

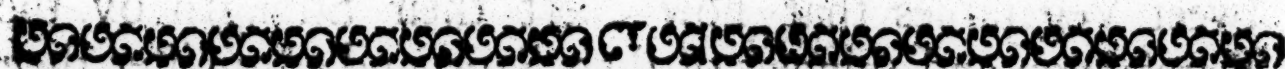
tion, induced me to use my utmost Efforts, in some Measure to bring them about, still hoping to see them advance, by the laudable Endeavours and Example of some unbiassed Persons, who will not any longer submit to support bad Customs, meerly for the Sake of Profit, in a Case that so nearly concerns the Health and Well-being of Multitudes. The aforesaid new Methods of making Malts, Brewing Beers and Ales, and their advantageous After-management in the Cellar, with Variety of other usefull Matters never before published, I have here freely Communicated; which (I hope) will not only render the Work Compleat, but also be attended with its most wished for Effects, viz. The fully Apprizing the unwary Drinker of his Danger, as well as better Informing the Judgment of the Artist, and Directing his Practice in the right Channel.





CHAP. I.

*Of the four Quarters of the Year, as they relate
to Brewing Malt Liquors.*



I. Of the Spring Quarter.



AIR of itself is a Fluid of an Elastick or Springy, yielding Nature, of a thinner or thicker Body, as it is more or less compress'd, dry, or moist. From the two Principles of Heat and Moisture all Bodies are opened, and made to exert and diffuse their innate good or bad Qualities, whereby they are rendred capable of mingling or incorporating with the Air of the Place. From hence it is, that there is a pregnant Reason for brewing in the spring Time, because then both Air and Water are stored with Exhalations from growing Vegetables, which join others, and especially those of the same Kind: and thus it is, that the
B Par.

2 *Of the four Quarters of the Year, as*

Particles which float in the Air, are, as it were, suck'd in by those of the Water, Malt, Wort and Hops, to their great Improvement, especially in the Open Country. Of this Communication, the ingenious Mr. *Boyl* makes a sort of Proof, by telling us that a Piece of Allum divested of its Salts, and hung up in the Air, will in time recover its pristine State from the Salts of the Air. Others say, that if a Water is distilled from a fragrant Vegetable, and becomes almost vapid and dead, tho' at more than a hundred Miles from any Land, will yet in the spring Time regain its Scent and Virtue, by joining in contact with its similar Particles, which float in the Air, and are diffused over the whole Earth and Sea : as is also particularly apparent in Wines, Cyders, &c. which commonly fret when the Vines and Trees are in Blossom. Therefore the spring Season must be very convenient for brewing Malt-Liquors ; because then the Pores of the Earth are unlocked, and the Aromatick Nitral Vapours set free after having been bound in by the Winter cold ; but now ascend by the warm Powers of the Sun, which replenish our Atmosphere with lively and Sulphureous Particles, arising from the sweet Vegetables that now exert their Strength by the Rarefaction and thinness of their Saps, and administer their fragrant and salutary Effluvia's to all things they can come at ; and that in the greatest Perfection, when it arises from Corn-fields, Gardens, large Commons, and where Trees and Hedges are not too thick, and the Land too low and watery. And though Blossom-time is accounted dangerous for brewing even to a Proverb, yet I cannot help being of a contrary Sentiment, for reasons I shall by and by assign ; and also because the Air and Waters in *March, April* and *May*, are seldom damaged by the violence of Heats and Droughts, which makes me suppose the Saying was broached when the Art of brewing was little known ; for now the Springs generally run high by the Swell of the Winter Rains, that consequently must render them more pure : So that in this respect *March* far exceeds *October*, because it's to be supposed the Waters then are low after a Summer's dry Weather, which in course leaves them
very

they relate to Brewing Malt-Liquors. 3

very earthy. But the Rain Water in particular has the greatest Advantages, because it is freer from any earthy, saline and metallick Quality, than any other Sort whatsoever. Besides which, the fat, dewey and vegetable Exhalations in the Atmosphere, as they meet this delicate Water, must still be an additional Improvement to it, and make it exceed all other Sorts at this time of the Year for Brewing; and especially if Ale is made with it; which leads me to renew my former Observation, that now is the best Time to brew the Pale and Amber Sorts of Malt-Liquors, for their more immediate enjoying the Rarefaction and Melioration of the Summer-Air, which best agrees with all Drinks made from tough Malts, that have the least Share of Fire in them; as the Winter-Air does with the brown Sorts, whose bodies are loaded with igneous Particles, and best reduced into a smooth temperate Condition by that frigid Season; and therefore *October* is very justly prefer'd for brewing such high Colour'd Liquors.

II. Of the Summer Quarter.

In this Season is the Extream of Heat and Drought, as in Winter of Cold and Moisture; and therefore 'tis not so agreeable to Brewing as the Spring and Autumn, because it hastens Fermentation too much: Upon which it has so great a Power, that it is difficult to keep the Drink from too high an Agitation; and then the Spirits fly away, which should be most carefully preserved for the Conservation and Fining of the Drink. Now also Rivers, and more especially Pond-Waters, are most impure, not only from the great Quantity of growing Vegetables, but likewise from the Breed of Insects, that makes it both unwholesome and improper for brewing. And here I must observe the Unhappiness of those People, whose business necessitates them to live in a bad Air, and in the Use of worse Water, which many in the Low-grounds of *Kent*, *Essex*, and some other Parts of *Britain* do, particularly those in and about *Prittlewell* and *Ratchford*, about two Miles from the Salt Water in the Hundreds of *Essex*, over

4 *Of the four Quarters of the Year, as*

against the Isle of *Shepey*. It is here the Water so affects the Land-springs, that both their Wells and Ponds afford them little other than a brackish alluminous tasted Water; inſomuch that it cauſes their Drink which is brewed with it, to turn ſoure preſently, and their Bread to rope as well as their Beer; and the more becauſe it's Saline Quality makes it ſo penetrating and ſharp as to extract and bring away with it the Tincture of that muddy Sullage or Earth, that lies in great Quantities on their Shore, as well as thoſe mineral Earths through which they are ſtrained and paſs; and thereby probably communicates ſuch unwholeſome Qualities to their Bread and Beer, which cauſes theſe lamentable Effects; as the Natives themſelves juſtly believe, who ſay that their Water taints the Dough beyond the Power of the Fire to cure: For ſometimes in two or three Days after it is baked, it will appear like Cobwebs, every time it is cut, and if broke, it will plainly ſhow it ſelf ſtringy and ropy. Not but that I muſt own this cobwebby, ropy Condition of the Bread may be, and is often brought on by uſing ſtale ſoure Yeſt, when the Water is abſolutely good. Yet here is a plain Proof of the Corruption of the Water, becauſe if the Yeſt is good, theſe Miſfortunes will happen; to prevent which, ſome of them boil Hyſſop in the Water, others the Twigs of an Aſh or Black-thorn, and find it very much answers their purpoſe both in Baking and Brewing. But there is a Difference even in brackiſh Waters, occaſioned by the Nature and Situation of the contiguous Earth; for in the Yard behind the Governor's Houſe at *Upnor-Caſtle*, that lies on the River *Medway* about two Miles from *Rochefter*, there is a Well out of which they pump a Water a little Brackiſh; and yet it makes both excellent Bread and Beer, as I have often taſted: The Reaſon is, the Shore that lies near it is a clean Sand, and ſo is the Earth through which the Salt Water is percolated or ſtrained till it mixes with the Freſh that ſupplies the Well: And what gives it a further Advantage is, that tho' it ſtands below the Level of the high Water-Mark, by which it becomes brackiſh; yet the Water is free from thoſe infectious Particles that a muddy

they relate to Brewing Malt-Liquors. 5

muddy Shore, and a flat Situation would consequently give it: For the very same Reason, the Inhabitants of the great Castle of *Dover* enjoy a most fine clear soft Water, out of perhaps the deepest Well in *Kent*; and that free of any brackish Taste, because the Earth, adjoining to the Salt Water, is a Rock of Chalk, wherein this Well is situated within less than a Quarter of a Mile from the Sea. And here I cannot but observe a Neglect that many are guilty of, to make use of foul pond or river Waters, that in particular require first a Clarification of their fulsome, unhealthy Particles, before they are used in brewing, and especially such that are supplied by Currents from the common Road, or other dirty Conveyance. But where there is not Conveniency for doing this, or that the Trouble and Charge are thought too much to give them time in Cisterns or Tubs to make their Sediments; the last Opportunity ought punctually to be observed, and that is, by scumming clean such Water, as it is heating in the Copper: For though it may be objected, that these sort of Foulnesses may be discharged by the several after Fermentations, it is certainly wrong Management, to suffer such Filth to accompany the Wort till that Time; because the infectious Scum will be incorporated with the Drink, by the three Digestions of mixing with the Malt boiling and working, so as to tincture it with the ill Qualities that may be contained in such Waters, as I have shewn in the Example of Distillation. But when necessitated to brew with such foul Water, see the Remedy in my second Part. Well-Waters now are sometimes very low for want of sufficient Supplies of Rain, and thereby the subterranean Circulation is slow, and almost stopt, which gives the Earth a greater Power to load such Waters with earthy, mineral, stagnating and insidious Particles, which in Spring and Winter, they are most commonly free from, by the Plenty of fresh Waters, that then saturate the Land; for which Reasons, all possible regard ought to be had to obtain Water in true Order, as it is the Fountain of Life to all Vegetables; for by it they are generated, nourished, and increased; and thus it opens the

Gates

6 *Of the four Quarters of the Year, as*

Gates of Nature, for all Properties to breathe and send forth their innate Qualities. — The softer and purer Part of Water may be drawn off, and the harder and more earthy, saline left behind, by passing it through an Alembick. Another common demonstrative Proof is, that of our Tea-kettles, whose Insides are loaded and crufted with the terrene, and fix'd saline rough Particles of the Water, which consequently must evaporate its better, softer and more pure parts by boiling, and thereby render it harder.

III. *Of the Autumn Quarter.*

This Season is commonly attended with moderate Weather, and often fine Showers, especially about *October*, that then begin to recruit the Rivers, Ponds, and Wells, with fresh Supplies of pure Water, after a dry Summer; which capacitates them to be more serviceable in brewing good Malt-Liquors, than in the preceeding Season: But are most advantagious to the brown Sorts, which stand in need of a cold Air to reduce their fiery, sharp Particles, that by many, of the Country People in particular, is not at all regarded, whom I have known to use a hard keen Water for this Purpose, which in a great Measure locks up the Pores of this Sort of parch'd and burnt Malt, and so deprives them of their expected Length or Goodness of their first Worts; which a soft Water would easily extract and bring away, and which in brewing strong *October* brown Beer, must be very detrimental, because it not only deprives them of their Quantity, but also endows such Drink with a sharp, griping Quality, that the sooner brings on Staleness and Loss. A further Proof of the Effect of hard Water we have very plain in a fresh Cod, which to dress nicely, the Cook cuts into several small Pieces, in order, as they call it, to crimp it, by letting them lie in hard cold Spring-Water about an Hour, and then boiling it in the same sort; by which Management it will harden, curdle and keep its Whiteness, insomuch that it will eat almost

they relate to Brewing Malt-Liquors.

most as firm as Beef. But in case there is no other Sort to be had to brew this brown Malt with, or if Pond or River-Water be foul, take some Ashes made on a clean Hearth burnt to Whiteness, from green *Ash*, or from *Beech* which some say is better; and after they have been well sifted, put the fine Ashes in a Bag, and hang it a whole Night in a Cask, Cistern, or square Tun of such Water: It will not only soften the one, but cause the gross Particles of the other to subside by Morning, and in a great Measure cure it of the unwholesome, metallick Qualities, make it better extract the Virtue of the Malt, and preserve it against Foxing, being of so wholesome a Nature as to be prescribed by Physicians as a good Diuretick.

When such Water is thus prepared for Brewing, draw it out of a Tub or other Vessel, by a Syphon, or a Cock, placed three or four Inches above the Bottom, that the Fæces may be left behind. At a certain Town in *Sussex*, from *Michaelmas* to *Alballontide*, their Well-Water has such an earthy ill Quality, as renders it unfit to brew with; because the strong Beer made of it won't work, inso-much that they have been forced to brew it over again, though all the rest of the Year it is pretty good. Yet, by way of security, they are forced to boil their Wort several Hours, else it will stink in a Week or two's time. This Town joins to the Salt Water.

IV. Of the Winter Quarter.

Now Water by cold becomes of somewhat a thicker Body, so that though it is in it's utmost Heat, yet is it not so Capable to enter the Pores of the Malt and wash out it's Salt and Oyl, as when us'd in a more temperate Season. The same Effect also the Cold Air has on the Malt to restringe and keep back the Emission of its Virtue; for which Reason at such a Time, the Water should be used in the Highest degree of Heat the Nature of the Malt will admit of. To do which there consequently must be a greater Evaporation of Steam, which certainly is very prejudicial to the Drink; because the Vapour of the
Water

8 *The State of Barley for the Year 1737.*

Water is no less than the lighter, purer, more subtil and penetrating Part of it, that should enter into the small Pores of the Malt, and there, by its attenuating Particles, open, dilute and wash the Oil out of its tenacious mealy Body. From whence it is plain that there is a great Expence and Loss of the Water's finer Parts by the Steam, to the prejudice of the Drink; and though it is a general Practice to brew without having any regard to this serviceable Management, it is nevertheless true, that this Observation is most Valuable, and by all means should be observed with the greatest Nicety by all Brewers whatsoever. This Season greatly retards Fermentation, as the Summer forwards it too much. — Therefore a prudent Brewer will now avoid this Work as much as he can, and be the more cautious in guarding what Wort he's necessitated to make, from the danger of this Extream.



C H A P. II.

The State of Barley for the Year 1737.

THIS Summer 1737, being a very dry one, and attended with a wet Harvest; that Barley which was sown early in *February* and *March*, got so speedy a Cover, that with the Help of the Dews it grew apace, and prov'd an excellent Crop; but that which was sown later, in *April* and *May*, as bad. The first Shoot and Ear was of a large Size, the last produced a little Shoot and small thin Kernel; insomuch that this, and that which sprouted in the Field by Rain, after it was mow'n, would not make Malt; which occasion'd a Person of good Judgment to say, that he verily believ'd, every tenth Corn never spired on the Floor, but remained Barley to the last. Nay it was reported, that seven Quarters of these under-
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ling Kernells were sifted out of a large Quantity of Malt, which in a manner prov'd all Barley, and fit for little else but to grind and fat Hogs. So that many must consequently have suffer'd a great Loss, (the ignorant Buyer especially) both by Measure, Tax, Making, and above all by the Disappointment of Brewing good Drink; for that there has not been such a Season these seven Years past for bad Barley. This therefore is to inform all Farmers, and others who are Sowers of Barley, of that incomparable and invaluable Receipt, for the Improvement of this Noble Grain, publish'd by *William Ellis* of *Little Gaddesden* near *Hempsted* in *Hertfordshire*, in his Monthly Book for *April*, 1736, intitl'd *New Experiments in Husbandry*; which shows a new Method how to steep Barley Seed in a certain cheap Liquor a Night and a Day, and then to lime and sow it: A Receipt first invented at *Paris*, but perfected in *England*; which will cause it so to branch as to bring on a Cover at once, and secure the Crop throughout the Summer, in a flourishing Manner, with little more than the Help of Dews, and also give the Barly a fine even Body, an exalted Virtue, and a great Increase; as he himself yearly proves, and which no Sowers of Barley should be without, because even in later Seasons, on Chalks, Gravels and Sands, the Ingredients will bring on a most fertile Cover and Growth. In the same Book is contain'd many more practical, valuable Secrets never before publish'd, and sold by the Booksellers hereof.

CHAP. III.

Of Malt Kilns.

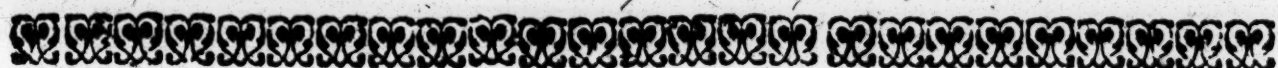
THE Plate Kiln, and the Tyle Kiln, which are full of small Holes, were invented to dry brown Malts, and to save Charges; because in both these they use no Hair Cloth, but dry three Kilns of Malt in less than 20 Hours.

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These I cannot commend, by reason the Ends of the Corns are apt to pitch and lodge in the Holes, and there are parched or burnt, when some other Parts of the Malt's Body will be in another Condition. So likewise is it with the Wire-Kiln, which is also work'd without the Hair-Cloth ; but then the Kernels are apt to lye between the Wires and be scorched too much. However these all answer their Ends in making a high colour'd Malt to please the Londoner, especially, with their blood-red Drink. The next is the Free-stone Kiln, one of the best Sort of all for drying pale Malt, either with Coak, Welch-coal, or Straw, &c. and generally is at least twenty Hours in drying off one Kiln. Its common Dimensions are twelve Foot square, laid with four Rows of Stones, three Foot wide each Stone, or with more if less, containing many holes, each being as broad again at Bottom as at Top, over which a Hair-cloth lyes ; these Stones lie on common flat Iron Bars, supported by common square upright Iron ones ; and is now more and more in use. I have also seen another very profitable and sweet Method of drying brown Malts, exceeding all the Wire, Plate and Tile-Kilns, performed by the help of four cast Iron Plates, of about an inch thick or somewhat more, and near three foot square, with which they burn Newcastle Coal, and convey its fulsome Smoke through a Flew or Funnel, so that the Malt is dry'd very leasurely and in a pure Condition, by the Heat contained in the several Pieces of cast Iron ; which at first was invented to supply the Place of the Iron Pipes that dry'd Malt by hot Air, at a very chargeable Rate ; but this is a very cheap Way. Now as there are various Sorts of Fuels and Kilns to dry and cure Malt with, there are also diverse fancies and opinions concerning them. Some will use no Drink made from Welch-coal, alledging it has a disagreeable Tang from its sulphureous and smokey Vapour. Others argue, the same, on account of Coak or Cinder. Others object against the smokey unpleasant Taste of Drink made from Malt dry'd with Wood ; while some again are Advocates for it, and prefer it to all others ; so that the Custom of the Place in a great Measure carries

Of Fuels for drying the several Sorts of Malt. 11
ries it. However, there is too much Truth in this, that was said by a judicious Maltster, in a famous Town where there is reputed to be above twenty of them; That not above six of that Number were Masters of their Business. But, let them understand the Art ever so well, and practise it with the most advantageous Conveniencies, yet none can come up to the help of Flews, or Malt dry'd by the Sun alone, through a sufficient number of Glass Windows in a proper Situation.



C H A P. IV.

Of Fuels for drying the several Sorts of Malt.

Wood.

THIS Article I think myself obliged to reassume, although I have already wrote on the same in my former Treatise; because I have since seen different ways of performing the drying of Malts. There are many Maltsters where Wood is plentiful that use this Fuel, as being the Cheapest they can have for their purpose, and is generally of but two Sorts, *viz.* The *Oak* and the *Beech*. The first, as it is of a very hard and durable Substance, they lay up in great Piles or Cocks to dry, and waste the sappy phlegmatick part of the Wood, so that when they come to use it, it will the sooner run into fire, and consequently less smoke, whereby the Tang or Vapour of it does the less Harm to the Malt. And so careful are they in this respect, that some will keep the *Oak* fort seven or ten Years by them before they use it. But as the *Beech* is a Wood that much sooner decays, they only pile it abroad one Year, and take it into the Malt House next, so that two Years fits this for Use. And to make it answer better, many in the Western Parts burn Coak with this, or *Oak*, and thus make it run sooner
C 2 into

12 Of Fuels for drying the several Sorts of Malt.

into a clear Fire, and less into Smoke. The Roots also of the *Oak* by some are preferr'd, because of their soft nature and quick burning. So the *Ash* Billet is esteem'd a valuable Fuel, but this is scarce in most Places. With this Fuel of Wood, they generally dry their brown Malt.

Coak.

This consequently has less Sulphur or Bitumen in it than the Welch-Coal or Culme, provided it is carefully cured in the Oven or burning Place. For in the Management of this, there is a considerable Difference, which makes them say, that the Coak made at the Coal-pits, much exceeds that made elsewhere; because there they burn it in larger Cakes than they do in other Places, for the smaller it is burnt the worse it is. However, to make this go the further, many, as I have observed, lengthen it out with *Oak* of ten or fifteen Years old, which they burn together in a fixed Grate; for by this Age such Wood comes near Charcole which is the best of Fuel, and which undoubtedly would be mostly used for drying Malts, could it be afforded; because, nothing is more detrimental to Malt than Smoke; and though the Wood of *Ash* yields the whitest Smoke, yet will such footy Vapour, tinge the Malt with a high Colour. With Coak they generally dry the Malt used for brewing Ale; for if this is truly cured, it certainly has less Sulphur in it than any Welch-coal or Culme; and therefore the Drink made from such Malt may be used much sooner than that from Coal or Culme, which requires at least nine or twelve Months age, to overcome the sulphureous Tang of such Malt. Yet is this Coak also used by many to brew their *October* or keeping Strong-beer with, as an excellent Fuel, as was proved by its effect in the Butt-pale-beer, sold at the *Half-moon* in *Warminster*, which was the finest I tasted upon that Road, and frequently sent to *London* for Presents, being brewed with a hard Water, of a white Maumy Rock, that on Tasting, seemed to me more Brisk and Spirituous than any I ever drank; which, I think, is easily accounted

Of Fuels for drying the several Sorts of Malt. 13

accounted for: For upon Examining into the Nature of this Earth, I understood it to be a strong Sort of Chalk, well stored with Alcalious-salts, which consequently gave the Water a superiour Strength, as it did the lean, white, yellow, and red, sandy Land, it was laid on; for with this same Maum (not Marle) they dress and manure their Ground many Miles about this Place, and are forced for this purpose, to dig it out of Pits, and not out of narrow Places like Wells, as we do the soft Chalk, because this Sort is too brittle for such Confinement; and out of these Pits they take great Pieces, that they carry into the Fields, where they break it small with a Sledge, and, after a frosty Winter, it becomes so fine, as to mix with the Earth; and so enriches it, that for ten Years together, there needs no other assistance; it being a Rule here, that the harder the Maum, the stronger Nature it is of, and then it's thought to do double the service of soft Chalk. In short, Coak by many is preferr'd to Welch-coal or Culme, by reason it is less prejudicial to the Liquor; for the less Tang it has the more agreeable it is to the Palate.

Welch-Coal, Culme, or Stone-Coal.

By all these Names this Fuel is known in diverse Parts, and though it comes only out of *Pembrokeshire*, yet is there a great Difference in its Nature. One Sort, on holding a Piece against the Sun, will appear in shining golden Streaks, occasioned by the greater quantity of Sulphur, that its impregnated with more than others, and less of the Bitumen or pitch Part; so that this is said not to smoke at all, and therefore makes the finest of Pale Malt; whereas all other Sorts that appear of a solid, shining, jetty Black will smoke more or less. This Coal or Culme is dug up at *Milford*, *Haverford-west*, *Tenby*, and other Places in the County of *Pembroke*: But none is so much in esteem as the golden streaked Coal of *Tenby*, which is endowed with so much Sulphur, that in the Ships that come from thence, they can hardly bear the Room it's burnt in, and at *Bristol* is sold for 8 d. a Bushel, where they

14 *Of Fuels for drying the several Sorts of Malt:*

they are in no small concern for this Sort of Coal, because its great Usefulness has of late encouraged them to dig so much out, that their Mines at this Place are almost exhausted, and which in a few Years they are like to sustain the loss of. At a famous Town in the *West* for brewing Beer, they burn this Welch-coal in a moveable Iron Grate with four Wheels of about six Inches Diameter each, called there a Waggon, being eighteen Inches high, as much over, and three Foot long, to wheel out when they turn the Malt on the Kiln, lest the Brimstone Vapour of the Fire suffocate the Workman. In this County they distinguish one Sort from the other, by calling the biggest Stone-coal, and the smaller Culme, which latter many in *Wales* work up with Clay and Water, to the bigness of a Cannon-Ball, and then it will burn in Grates, but the Stone-coal will not without some Cover to keep it from the Light.

Wheat Straw.

This Fuel though it is one of the most ancient Sorts, still keeps its Reputation, so that when it is in due Order and managed by a skilful Hand, none exceeds it for drying of both pale and brown Malt, for Brewing either Ales or Strong-beers: Because, I suppose Wheat-straw to be in a thorough dry Condition when it is used, and a Fuel the most free of Salts and Sulphur of all others; as is plain from its Ashes, which are the least efficacious of all others, when laid on Meadow or ploughed Ground, as I have duly proved. From hence it is that the Smoke of this sweet Fuel is so little prejudicial to the Malt, and I must own, that in all my Travels, I never tasted any Malt-Liquor more Pleasant than that dried with Wheat-straw, which when rightly imployed, free of Weeds, under a Free-stone Kiln in particular, is inferiour to none; as it is commonly done at *Lavington* in *Wilts*, and other Places. But this delicate Fuel, is refused by many for two reasons; First, because it is somewhat dearer than some other Sorts; Secondly, because it requires the Care of two Men to a Kiln;

Kiln ; for here the Fireman is obliged to give such close Attendance, that he cannot leave his Place to turn the Malt ; whereas, with Wood, Coak, or Coal Fuels, the Fireman can do both. Which leads me to take Notice of what, in my humble Opinion, is a Mismanagement in some Brewers, who for cheapness sake will buy Wood-dried brown Malt, commonly made on Kilns without a Hair-cloth, for brewing the common Butt Brown-beers, sometimes at 16 s. per Quarter, when the Pale sort is at 22 s. or 24 s. As believing the smokey Tang, by Time and the great Quantity of Hops, will be overcome. But I have known many Instances, where the Hop has overcome such Drink by the Smallness of its Body. And no wonder such blood-red Beer has more Colour than Strength, since the Brewer, by the low Price he will have the Malt at, forces the Maltster to make it accordingly ; and then he so blows up Kernells by the Vehemency of the Fire, that by that and the Help of the Malt Tails, he fills the Bushel with a great deal of Show and little good Malt ; Insomuch, that I have heard of a Maltster who gave 30 s. a Quarter for his Barley, and sold his brown Malt at but 25 s. by means of the great Increase he was this way obliged to make, to ballance the Brewer's low Price. For it's a common saying, that there is brought to *London*, the worst of Brown Malt, and the best of Pale.



CHAP V.

Of the Great Common Brewhouse.

THE Improvement which has been made of late Years in this Brewhouse are many, insomuch that four Men's work may be done by two, and as well, as I shall make appear by the following Discourse ; and first of the Situation and Building of a Brewhouse. This in its full

full conveniency is certainly of great Importance towards obtaining good Malt-Liquors; for this purpose, where it is to be erected independent of any other Building, in my humble Opinion, three Sides in four of its upper Part or second Floor, should be built with wooden Battons about three Inches broad, and two thick, according to the present *London* Mode; which by its many vacant square Holes admits sufficient Air, and seldom too much Sun; so that the Backs or Coolers by this means have a quick Opportunity to cool a thin laid Wort; especially, if the Wall farther side stands to the *South-west*, where the Copper is to be fix'd with an Arm near the Bottom of the same, and a large Brass-cock at its End, to discharge with expedition hot Water into the Mash-tun, and Wort into the Coolers. For this purpose, its Bottom should stand about ten Foot above the common Level of the Street-ground, whereby is prevented in some degree the cooling of the Water and wasting of the Wort; for now the tedious ascending Motion of the Pump is avoided, and the Charge of that and Man's Labour saved. But besides the great Copper there is commonly, in a large Brewhouse, a lesser one; if the first holds twenty Barrels, the other may contain Eight: The large one for boiling brown Worts, the lesser one for Amber and Pale-Ales. In former Days, if there were two Coppers in a Brewhouse, they were at such a Distance, that it might be properly said, there were two little Brewhouses near one another, which obliged the Master to have a Man to attend each Copper. But the present Contrivance excels the old one, and these two Coppers are now so erected that each Fire-place is within Foot of one another; so that one Stoker supplies the two Fires and Coppers, which saves the Wages of one Man, that usually amounted to near 30*l.* a Year; besides having them now under a more immediate Inspection of the Workman Brewer.

The second Improvement that has been made is also of considerable Service, and that is by grinding the Malt directly into the Mash-tun; which is performed by the help

Help of a long descending wooden close square Spout or Gutter, that immediately receives it from the high fix'd Mill-stones, and conveys it into a cover'd Mash-tun, that thus effectually secures the light Flower of the Malt from any Waste at all. Whereas, formerly they used to grind it into a great square boarded Place, which lay lower than the Mash-tun, commonly called a Case or Bin: From hence it was taken out with two Baskets and put into the Mash-tun, to the Loss of some Quantity of the finest Flower of the Malt, that would fly away and make a Lodgment on the Men's Cloaths, and the adjacent Places. But now the Charge of building and repairing the square Case is altogether saved, its Room put to some other service, the Expence of Ropes and Pullies sunk, and the two Men's time converted to other necessary Uses in the Brewhouse.

The third Improvement is the Water-pumps. These formerly were erected in a Brewhouse for the convenient Conveyance of Water out of the Receivoir and Well; the Former for the New-River, and the Latter for Spring-Water. They were work'd with long Iron Pendant-handles with a large Knob of Lead fix'd to their Bottom ends for the greater Ease of Men's Labour: But the present Contrivance works both these Pumps with more expedition by a single Horse put into the Malt-mill, and that in as true a Manner as any Men whatsoever; which saves great part of a Man's Wages.

The fourth Improvement is by the Wort-pump. This used to be work'd with a long Iron-handle as the Water Pump was, but is now likewise supplied by the Horse-mill in the same Manner that is, and will with great Expedition throw up the Worts out of the Underback into the Copper.

The fifth Improvement relates to the Backs or Coolers, which are certainly more conveniently placed in a great Brewhouse, than in the private or small one; because in many of the former, they have full room to lay them on a single Stage or Story. To each of these is fastened a Leaden-pipe about an Inch or two Bore, with a Brass-
D Cock

Cock at the End, that discharges the Wort at pleasure into a square or round Tun ; besides which is also another Hole about four Inches Diameter, fill'd with a wooden Plug, whose Use is to let out the Dregs swept through it into a Tub under the same, to be strain'd by a Flannel-Bag fastened to a Barrel-Hoop, and the clear Wort thus strained is mixed with the Rest. This leads me to observe the Misfortune that I have seen some labour under, who being confined to a narrow Space of Ground, run into Brewings of great Quantities of Drink, which obliges them to build three Stages of Backs one over another, that often occasions their Worts to Fox, or Damage in some degree, by the long Heats the under one sends upwards, so that the flat Planks are made hot both at Bottom and Top, and thereby deprived of one of the principal Conveniencies in Brewing, a due Freedom of Air, which a single Stage seldom ever wants. By means of the Copper Arm, the Worts now run swiftly into a single Teer of Backs, that formerly used first to be emptied by a Pump placed in the Copper, and thrown up into a little Back, just over it, from whence it ran out into the great Backs ; and if there were one or two Teer more, the Wort was convey'd into the same by a small wooden Pump placed in the Copper-Back. This better Management saves the Loss of a great deal of Time, Waste, and Men's Labour. These Improvements, and many others that I am sensible of, rais'd my surprize to see several great common Brewers in some of the *Eastern* Parts of *England*, brew ten Quarters of Malt or more at a Time in a Mash-tun, placed almost close to the Ground, the under Back deep in it, expos'd to the Fall of Dirts, drowning of Insects, and other Foulnesses. The open Copper also a little above the common Level of the Earth, the Coolers in a proportionable Lowness. And to make up a compleat Mismanagement, They Brew most of their Four-penny Ales after their Six-penny Beers : So that you can have no mild Drink here, but what tastes of the earthy Parts of the Malt and Hops to such a Degree that I was commonly forced to be at an extravagant Charge, and mix

mix some Ingredients with it, to correct its unpleasant Taste and unwholesome Qualities.



C H A P. VI.

Of the Private Brewhouse.

BY this Name, I would be understood to mean all such Places that are occupied and set apart for Brewing Malt-Liquors, for Tradesmen, Gentlemen, and Others, own particular Uses. A matter of Pleasure, and Profit enough in my humble Opinion to induce an *Englishman* to love the Production of his own Country, and prefer it to those of Foreigners; because by this Opportunity every one may be Master of his own Fancy, have his Utensils in the best Manner he thinks fit, chuse his own Malt, brew when he will, and what Sort he likes best. Here he may enjoy his leisure Workings and light Fermentations; in short he may here act the absolute Governour, and brew his Drink after the best Rules and Instructions. And when Malt-Liquors are thus made according to the newest Improvements, in my Opinion there will be less Cause than ever of gratifying our Palates with adulterated Wines, at the Risque of our Healths and Expence of our Pockets. In order then to come by such salubrious Drink, it is truly necessary in the very first Place to be Master of a convenient Brewhouse; for without this, it is but a lost Attempt to get right Malt-Liquors. And here the Case admits of two Suppositions; First, whether such a one is to be had by Choice; or, Secondly, of Necessity: If by the First, then the *Northern* Part claims the Preference for Shade and Coolness, that are of Importance in this Affair; but if by Necessity, then the Case allows of no dispute: However, where it so happens, that the Brewhouse can be near the Cellar, it will save a great deal of Time, Charge and Labour; because then the Drinks are

fooner, easier, and safer convey'd into it; but more where it can be carried by the Leather-pipe from the Tun, Cooler, or Starting-tub into the Cask; as is now done by some of the abler Sort.

And observe that the Arm and Cock are not confin'd altogether to a raised Copper in a great Brewhouse; for in a Private one, this is also absolutely necessary, even though the Copper is confined to stand as near the Ground as possible; because both the hot Water and Worts may be drawn off quicker, and safer from any Danger of Scalding and Wetting, that the common plain Copper very much exposes a Person to, who is obliged to empty by Scoop, Pail, or Hand-bowl; which is a Conveniency of no small Moment, if we consider the many Disasters that have befallen this hazardous Method; besides the Time, Wear and Tear, which are here likewise saved.

In private Brewhouses, there is seldom room enough to be had for those necessary Conveniencies, Square-backs; or, if there is, the Charge is often grudged, or at least can't be afforded; but where it can, it is wrong to want them, because these are the chief Securities against fox'd, sour, and foul Malt-Liquors; for here it is that the Sediments must be first left behind, and the Worts cooled at discretion; for it is certain that the shallow Back can discharge the Wort finer than the Tub, as being fixed in its Place and never disturbed while the Worts are running off; whereas Tubs must be moved to pour the Drink clear from the Bottoms, or else the Hand-bowl must be gently used, which in some degree will likewise disturb some Part of the gross Fæces or Bottoms. These Backs in the great *London* Brewhouses are generally made with the Heart of *Oak*; but in most Country Towns, they make them of *Deal* or some of the aquatick Woods at an easy Price. But then, as I said before, these Coolers are of but little Service where they are placed too close to one another, because one heats the other, and often charrs the Wort; as I and many others have too much reason to complain of: For when I travelled the Road in 1737, at several Towns, I could have no other than foxed Ale, and thick
unwholesome

unwholesome stale Beers, which made me ask a great Inn-keeper, who was his own Brewer, why his Malt-Liquors were in such a bad State? His Answer was, that all the Summer Time it was commonly so, but good in Winter. This induced me to inspect his Brewhouse, where I found his Copper, Mash-tun, and Coolers, as near as they could be together; his Underback or Receiver deep in the Ground, and Part of it in the Way of the Dirt of Shoes and other Nastiness to fall into; his two square Coolers fixed about eighteen Inches one above the other, and all in a small narrow Place; so that this Person was seldom or never clear of fox'd or prick'd Drinks in some degree: Though in Winter his Ignorance made him believe they were sound brewed, because the Taint was then not so much as in Summer.

The Mash-tun here should be as smooth withinside as if it was turned; because such an Utensil is not so apt to Furr as another made out of a large Wine-cask, whose Staves being uneven withinside, give room for a Lodgment of the Remains of Worts, which fail not to become of an Acid Nature and corrupt the next pure Worts, if not thoroughly eradicated. And indeed all Tubs, Pails, and Jetts, used in brewing, should be of the smooth Sort. Of this, some are so curiously Nice, that if by accident one of them happen to be dipt into cold Water, they will scald it a-new, and dry it before it is made use of. This small Mash-tun has several Forms belonging to it for discharging its raw Worts into the Receiver or Underback. One is by a Cock fastened in the Bottom, over which is another called a false Bottom, and is the best Way of all others; because by this, you may spend off the Wort very easy, safe and fine, free of any Danger from the Stoppage of Malt. The Second is by a Brasc-ock, fixed in the Side near the Bottom to a Tapp-wipps withinside. The Third is by a long wooden upright Plug, surrounded by a high Basket Strainer that stands almost in the Middle of the Bottom. The Fourth and last Way I think a bad one indeed, and that is done by a Spiggot and Foffet, which I have seen many use: Here
when

when they draw off the Wort from the Malt, they put a Birchen Twig into the Tap to adjust the Stream ; but sometimes the Weight of the Wort forces out the Spiggot, and then the Current alters, to the Fouling of the Wort ; to stop which the Fingers must be employed to put in the Twig tighter, and so expose them to a second Scalding.

The Floor of either a great or small Brewhouse is justly deserving of some consideration, as it is always more or less serviceable by its good or bad Condition ; for this like a Dairy-Room, should have all the propitious Allowances given it that can be, towards keeping it dry, sweet, and cool ; and therefore such a Floor should always be laid somewhat higher than the common Level of the Ground ; or with such a gradual Declination, as may bring away all Wetts and Slops, that consequently must often happen in such a Brewhouse ; for if it was otherwise, and Water and Worts were permitted to make Lodgments in Holes or hollow Places, there must in course be produced corrupt and foul Puddles, whose ill Scents and nasty Daubings are always ready to affect and damage the Utensils and Worts. For this Reason, all boarded and planked Floors are to be rejected, as they are oblig'd to be laid hollow on Joysts and Sleepers, that will surely rot them in a little Time, and create unwholesome Stinks and Vapours ; besides the great Danger that attends such a wooden Floor in it's Slipperiness when wetted, that exposes a Person to Falls as he is carrying scalding Worts or Water ; and also when two Men may be under the heavy Burden of a Barrel of Drink on the Slings, that weighs near 400 Pounds, which may occasion the Loss of their Lives. An Instance of this Folly, I knew once happen to a common Brewer in *London*, who thought it the cheapest way to have a boarded Floor in his Brewhouse, and accordingly bought *Oaken Ship-Planks* at *Chelsea*, for that purpose ; but the Consequence was, that in a little Time he repented himself of his Mistake, and had it laid with the broad Portland Stone.

C H A P. VII.

Brewing a Butt of pale Strong-Beer, by an Innkeeper.

I HAVE my Malt just broke in Grinding, to prevent my having foul Drink by the Mixture of its fine Flower in too great a Quantity, which I let stand in Sacks by the Mash-tun side, ready to be put in after the Water that is now heating in a Copper, holding a Hogshead and a Firkin under a close Wooden-cover to keep in the Steam, where it is to continue till it is ready to boil. In this condition, a Hogshead of it must be put immediately into the Mash-tun, and, as soon as possible, a Pail of cold Water in that, to qualify it, (though most others venture to mix this tough Malt with it in a boiling Heat) for receiving ten Bushels of Malt, that I put in very leasurely, whilst a second Person stirs it with an Oar or Paddle, as it runs out of the Sack, without any further mashing throughout the Brewing of Strong-Beer or Ale. Then immediately, with my Oar, I make room about the Basket upright Strainer for the sifted husky Part of one Bushel more of Malt, which I lay round it as close as I can; and, the Flower thereof, I spread over the Top, besides a single Bushel of Wheat-Bran over all that; here it is to remain three Hours in Winter, and two in Summer. At this Time, I have a Firkin of hot Water left in my Copper, to which I add a Barrel of cold to make it up forty-five Gallons: This I heat away, and make it just ready to boil against my first Wort comes off the Goods; which when it is fit to do, I loosen my Plug and spend it off by a small Stream on one Pound of rubbed Hops, returning first what comes foul till it runs clear: Then I make use of my hot Water in the Copper, and leak it over the Goods by a Jett, or three Hand-bowls at a Time, letting that almost go off before I put on more; and so continue till I have a Hogshead
and

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and six Gallons of Wort, which will about empty my Copper; for in this Case, I allow near a third Part of the Water's being drunk up by the Malt never to be returned, and sometimes more than the Waste of one eighth Part for the Worts boiling away. As soon as this is done, I rub three Pounds of Hops more, with near a Quarter of an Ounce of Salt of Tartar, and throw all into the Copper. At this Time I have another Copper, that holds a Barrel of Water, now boiling hot, which I lade over the Goods by degrees as before, 'till I got a second Wort off for making me half a Hogshead of Ale, that I sell within Doors for Four-pence a Quart. In the mean Time, I boil my Copper of first Wort, 'till all the Hops sink, which is the Sign of its being enough, without staying for the Wort's breaking or curdling; accordingly I strain it, and let it lie very shallow in Coolers. By this Time, I receive a Barrel of second Wort off, having here as much Wort returned as the Water that went in. This I boil with all the Hops that came out of the First, till it breaks, and then strain it into Coolers; observing to supply the Grains with a Hogshead of cold Water as soon as the second Wort comes off; which after it is soundly mashed, and has lain three Quarters of an Hour, I draw off, and boil it without any Hops a Quarter of an Hour; then I discharge it into my Coolers, to be heated next Morning and used instead of the first Water, which is call'd Doubling, for Brewing eleven Bushels more of Malt in the same Manner the last was done; only with this Difference, that when at last I mash up with cold Water for Small-Beer, I put only so much on as will bring me off thirty-four Gallons, for making me half a Hogshead in my little Copper, with the Hops that I us'd before.

Observations on the same.

The common Method of having but one Copper to one Mash-tun, has too often proved the Inconveniency of it by the bad Effects of Beers and Ales made from the same,

ame, which are often in Summer especially, prick'd or
four'd on the Grains, by the Length of Time they are
obliged to allow for the several Mashings and Soakings of
the Malt or Goods in the hot Waters; and if the Misfor-
tune seldom amounts to this Degree of Damage, yet, it
frequently happens that the Wort, less or more, is in an
unhealthy and unpleasant Condition; which to avoid, I
would advise every one that has a Conveniency to have
two Coppers to one Mash-tun. In this Case I address
my self to all except the great Brewer, who, though in
my humble Opinion he has most need of it, yet by long
Custom being used to his single Utensils, I can hardly
suppose he will alter; But I hope some of the smaller sort
will have regard to this Item, as a Method that certainly
must be very useful, in giving them an Opportunity to
enjoy a fine sweet Wort: For its generally allowed, if the
Wort goes into the Copper in a bad State, it will come
out so, and never receive a true Cure, as being damaged
in its first and best Condition. Now whether the Tun has
a false Bottom, or a Basket and Plug, or a Brass-cock
near the Bottom; the Form hinders nothing of this Be-
nefit: For if you brew with the false Bottom, by Mash-
ings and not Leakings over, then as soon as your first
Wort is spent off into the Underback or Receiver, you
are to run off your hot Water out of your Copper into the
Mash-tun for a second Wort; and directly get the first
Wort into the same to boil: Now as this your second Wort
will come off the Goods, half an Hour at least, before the
First is ready to go into the Coolers, here happens too
great a Vacation of Time, that may chance to prejudice
it, by thus being necessitated to let it lye out of the Cop-
per so long, which a second Copper prevents by receiving
and boiling it away directly. And as to the Mash-tun,
that discharges its Wort by Plug or Cock without a false
Bottom, this second Copper is rather more serviceable,
because your first Wort commonly lying two or three Hours
with the Malt, part of the same Copper which follows
will be expended in Leakings over to make a compleat Cop-
per of the first Sort: Then if you have but one Copper,
E there

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there can be no hot Water made ready as it should be for a second Wort, 'till the first is boiled off, and that will take up near two Hours; all which time the Goods must lie idle, and very likely prick or sour. Otherwise, you must hop the first Wort, and put it by into Tubs till the second is boiled, which will consequently by this lose some of the Hop's Spirit, and the purer softer Part of the Wort, &c. But if you have a second Copper of hot Water ready, when the first Wort is put into the first Copper, the Danger of these Misfortunes will be entirely avoided.

Secondly, The Heat of the Water, as I have more amply remarked in my two former Treatises on Brewing, should be in a greater Degree for Pale than Amber and brown Malts.

Thirdly, The Mashings also, for reasons I have formerly assigned, should be as little as possible, so as the Malt is kept from Balling.

Fourthly, The Steam of the Water should be kept in, as I have before accounted for.

Fifthly, The putting the hully Part of a Bushel of Malt round the Basket, is what never was exposed in Print before, though it is an excellent Way towards obtaining a fine Current of Wort, that gives a Benefit to the Liquor, even to the last.

Sixthly, The Rubbing of the Hops with Salt of Tartar is likewise a new Method of great service, in forcing the oily Part of the Hop to emit its viscid Quality, and expeditiously join in contact with that of the Wort: For by this, the fine flowery Part of it may be obtained, clear of the earthy Phlegmatick, which long boiling never fails of extracting, to the great prejudice of the Beer and its Drinker's Health. A Proof of it is evident from the smooth pleasant Taste that such Malt-Liquor receives from this Management, and which of late is in such esteem, that I know a Collector of the Customs, who boils his Hops but five Minutes, which certainly would be too little a While to get a sufficient Tincture from them, was it not for the penetrating and attenuating Nature of this Salt, whose Vertue is not only valuable on this account, but
also

also for fining and preserving the Drink afterwards. And though the common Criterion or Sign of the Wort and Hops being boiled enough, is by this Innkeeper and many others observed to be when the Hops all sink ; yet I think he is wrong in not boiling the Wort longer than the Hops, because I am sure the Drink won't be so soon fine in the Barrel, as that boiled till it breaks or curdles.

Seventhly, As to the boiling a Hogshead of small Wort at last, to serve as the first Water or Liquor to be used in the succeeding Brewing, the same or next Day, it is a good way ; because it adds to the Strength of the next Liquor, and conduces to preserve it sound the longer. But before I conclude these Observations, I must take Notice of an egregious Abuse that this Innkeeper and most others are guilty of, by brewing their common Ale from the Goods of the first Wort ; a Misfortune that is mostly known to Travellers by woful experience: For in many Parts of the Nation, there is no other mild Sort to be had, and then a Man is obliged to swallow so much Dirt of the Malt and Hops, that he must have a strong Constitution to overcome its dire Effects. — So also with the same Reason I observe, that when these Butt-Beers are loaded with Hops, without a sufficient Strength in the Drink to sheathe their acrimonious Points ; such Liquor I say must consequently be very injurious to weak Constitutions, whose Stomachs are less able to bear their Sharpness ; and what is worse, It must go very hard with such, when, on a Road, they are so unfortunate as to be confin'd to such Liquor in a Publick-House, which perhaps is the only one in the Village.

C H A P. VIII.

*Brewing a Hogshead and a Half of Pale-Ale
from fresh Malt, by a private Person.*

AS my Copper holds a Hogshead and a Firkin, and I am to brew twelve Bushels of Malt, I charge it full of Spring-Water, which I heat till it is just ready to boil, but not boil: This I put into my Mash-tun, and run ten Bushels of Malt very leasurely on the same, keeping it all the while stir'd by a second Person; which when it is sufficiently done, I cap with the eleventh Bushel, and let it stand while I get another Copper full of boiling Water as fast as I can; twenty-four Gallons of which I put into my Tun and mash up, covering all with the twelfth Bushel. Then I immediately add eighteen Gallons of cold Water to thirty-nine of hot left in the Copper, and get it into a boiling Heat against all my first Wort comes off; which after it has stood two Hours, I spend away, and boil it with two Pound of Hops, (first well rubb'd) in a roomly Canvas or such as they call straining Cloth; and at the end of thirty Minutes after it has begun to boil, I take them out, continuing the Ebullition till the Wort breaks enough, when I directly empty it into Coolers, and there have about forty-two Gallons. By this time, my second Wort is ready to go into the Copper, that I made by mashing up my Goods with the fifty-seven Gallons of boiling Water, and letting it stand three Quarters of an Hour before I discharged it. This I boil away with two Pound more of fresh Hops in the Canvas Bag, in all respects as I did my first Wort, and so receive off forty-nine Gallons, which with thirty-seven I had before, makes me eighty-six, that will (allowing for after Wastes) be about a Hogshead and a Half of Ale: And last of all, I mash up with thirty-six Gallons of cold Water to stand three Quarters of an Hour; and then I boil it with all my
Strong-drink

Strong-drink Hops, about an Hour and a Half, till I have about twenty-seven Gallons or half a Hoghead off for Small-Beer.

Observations on the same.

We may observe, that the Author of this Receipt is of Opinion, that the Water is hotter and more capable of extracting the Vertue of Pale Malt before it boils than after. For in this condition, he says, it is more loaded with igneous Particles than when raised to the State of boiling, whereby its Parts are more broke and divided, and so become more open to evaporate the Particles aforesaid, and admit too much of the circumambient Air, which must consequently render it cooler than before such Ebullition commenced. And further to prove this Assertion, if you do but just dip your Finger into Water, just before it boils, it will blister, but when boiling it will not.

Secondly, He here caps his Malt twice, the better to further the Business in hand, by confining the Heat or Steam, and is a good Way.

Thirdly, His boiling the Hops in a Canvas, must certainly give him the Satisfaction and Benefit of adjusting the time of such Ebullition, and also by it enjoy the great Advantage of boiling the Wort till it breaks or curdles.

Fourthly, But above all, he brews his Ale from Malt, and not from Goods, which must certainly load such Drink with the pure Saccharine Juice and lively Particles of the Grain, which are here obtained in their natural Order: On the Contrary, that Ale which is made only from Goods (*i. e.* after a first Wort is run off the Malt) must consequently be unpleasant and unwholesome as I have before remarked,

C H A P. IX.

To make China-Ale, and several other Sorts.

TO six Gallons of Ale, take a Quarter of a Pound or more of China-root thin sliced, and a Quarter of a Pound of Coriander-Seed bruised; hang these in a Tiffany or coarse Linnen-bag in the Vessel, till it has done working, and let it stand fourteen Days before you bottle it; tho' the common Sort vended about Town, is nothing more (at best) than Ten Shilling Beer, put up in small stone Bottles, with a little Spice, Lemmon-peel, and Raisins or Sugar.

To make an Ale that will taste like Apricot-Ale.

Take to every Gallon of Ale, one Ounce and a half of Wild Carrot-seed bruised a little, and hang them in a Linnen-bag in your Barrel till it is ready to drink, which will be in three Weeks; then bottle it with a little Sugar in every Bottle.

Egg Ale.

Take to twelve Gallons of strong Ale, eight Pounds of lean Beef, which must be cut into little Bits and half stewed with a little Water; and when it is cold, let the Gravy be put into the Vessel of Ale, the Fat being blown off; then let the Beef with twelve Eggs, their Shells being only bruised, but the Films not broken, a Pound of Raisins of the Sun stoned, two Nutmegs, a little Mace and Ginger, and two Oranges cut round, be put into a Linnen-Bag, and hang it in the Barrel before it has done working; put in also two Quarts of Malaga-Sack, and stop it up; let it stand three Weeks; then bottle it, and into every Bottle put a Clove and a Lump of Sugar.

Cowslip Ale.

Take to a Barrel of Ale, a Bushel of the Flowers of Cowslips pick'd out of the Husks, and put them into
your

To make China-Ale, and several other Sorts. 31

your Ale, when it hath done working, loose in the Barrel without bruising, and let it stand a Fortnight before you bottle it, and when you bottle it, put a Lump of Sugar in each Bottle.

Blackberry-Ale.

Take two Bushels of Malt, and make it into Strong-Ale, allowing a Quarter of a Pound of Hops to it; when the Wort is cold enough, put it up into your Vessel with a little Yeast, and the Juice of three Quarters of a Peck of Blackberries full ripe, and ferment them all together; when it has work'd sufficiently, stop it up close, and at six Weeks End you may bottle it, and in a Fortnight after, it will be fit to drink.

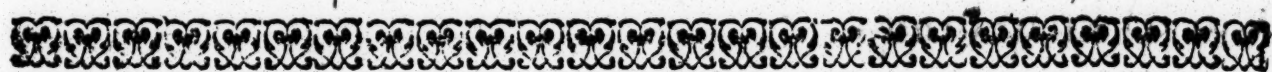
Cock-Ale.

Take a Cock of half a Year old, kill him and truss him well; and put into a Cask twelve Gallons of Ale, to which add four Pound of Raisins of the Sun well pick'd, ston'd, wash'd and dry'd; Dates sliced half a Pound; Nutmegs and Mace two Ounces: Infuse the Dates and Spices in a Quart of Canary twenty-four Hours, then boil the Cock in a Manner to a Jelly, till a Gallon of Water is reduced to two Quarts; then press the Body of him extreamly well, and put the Liquor into the Cask where the Ale is, with the Spices and Fruit, adding a few Blades of Mace; then put to it half a Pint of new Ale Yeast, and let it work well for a Day, and in two Days, you may broach it for Use; or, in hot Weather the second Day; and if it proves too strong, you may add more plain Ale to palliate this restorative Drink, which contributes much to the invigorating of Nature.

Elderberry Beer.

Take a Hoghead of the first and strongest Wort, and boil in the same one Bushel of pick'd Elderberries full ripe,

ripe, straine off, and when cold work the Liquor in the Hoghead, and not in an open Tun or Tub; and after it has lain in the Cask about a Year, bottle it and it will be a most rich Drink, that they call Ebulum, and has been often preferr'd to Port-Wine, for its pleasant Taste and healthful Quality. — *N. B.* There is no occasion for the Use of Sugar in this Undertaking; because, the Wort has Strength and Sweetness enough in its self to answer that end; but there should be an Infusion of Hops added to the Liquor, by way of preservation and relish. Some likewise, hang a small Bag of bruised Spices in the Vessel. You may make a white Ebulum with Pale Malt and white Elderberries.



C H A P. X.

Devonshire White-Ale.

THIS Ale that I have just hinted of in my first Part, I shall here write a further Account of, in order to set forth its Excellency, and pave a Way for its general Reception in the World. To this end I write with an eager Pen, by the Inducement of the best Qualities belonging to a Publick Liquor, *viz.* Pleasure and Health. About sixty Years ago (as far as I can learn) this Drink was first invented at, or near the Town of *Plymouth*, that lies on the Outside of *Devonshire* next *Cornwall*; A Place with its Dock so populous, that it was thought to contain near as many Inhabitants as the City of *Exeter*, though that had fourteen Parishes, this but two, and the Dock part of a Third; rich in War and poor in Peace; for when Trade was most flourishing in *Queen Ann's* Time, there were above six Goldsmiths Shops in it, well furnished. This Liquor is brewed from Pale Malt, after the best Method known in the Western Parts of this County; and as it is drank at *Plymouth*, in particular by the best of that Town, the Alewives

Alewives, whose Province this commonly falls under to manage from the Beginning to the End, are most of them as curious in their brewing it, as the Dairy-Woman in making her Butter ; for as it is a White Ale, it is soon sullied by Dirt, and as easily preserved in its frothy Head : Besides, here their Sluttishness would be more exposed, perhaps, than in any other Place in *England* ; because, in this Town there are few or no Cellars, on account of their Stony Foundation which is all Marble : And therefore their Repositories being above Ground, are generally exposed to the View of their Guests, who may passingly see this Liquor fermenting in a Row of earthen Steens, holding about five or more Gallons each : And, though the Wort is brewed by the Hostess, the Fermentation is brought on by the Purchase of what they call Ripening, or a Composition (as some say) of the Flower of Malt mixed with the Whites of Eggs : But as this is a *Nostrum* known but to few, it is only guessing at the Matter ; for about thirty Years ago, as I am informed, there were only two or three Masters of the Secret, who sold it out as we sell Yeast, at so much for a certain Quantity ; and that every time a new Brewing of this Sort of Ale happened : A great Ball or Lump of it was generally sufficient to work four or five Steens of Wort, and convert it from a very clear Body into a thick Fermenting one, near the Colour and Consistence of Butter'd-Ale, and then it was only fit to be used ; for if it was let alone to be fine or stale, it was rejected as not worthy of buying and drinking. Yet some out of Curiosity have kept it in Bottles, rack'd it off clear, and made of it Flip and other Compositions very good. Now this White Ale being thus fermented into such a gross Body, becomes a Sort of Chyle ready prepared for Digestion in the Stomach, and yet so Liquid as to pass the several Secretory Ducts of the Animal System soon enough to give room for new Supplies of this pleasant Tipple, even at one common Sitting in a Publick House : For though this Drink is not so thin and clear as the brown Sorts, yet by its new, lubricous slippery Parts, it is soon discharged out of the Stomach ; and notwith-

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standing such Evacuations, it leaves a very nutritious Quality behind it in the Body, that brings it under a just Reputation for preventing and recovering those who are not too far gone in Consumptions; and therefore would be of extraordinary Service to labouring People: In short, this famous Liquor is of such a salubrious Nature, as renders it a most agreeable Drink both to the sedentary and active Person; which plainly shows the transcendent Quality peculiar to this White-Ale, beyond all other Malt Liquors whatsoever: For who dare, nay who can make so free with any new Beer or Ale, while it is under Fermentation, as with this, and that by Reason of the poisonous Quality of the Yeast, and the fulsome, nauseating, unwholesome Nature, that such working Drinks are endowed with; whereas this invites one to drink it as fast as any of the common brown or pale Ales, and at the same Time administers to the Body such medicinal Assistance, that no other Malt Drink, Wine, nor any other potable Liquor now in Use, as I know of, comes up to it, not only for the aforesaid Intention, but it is likewise usually prescribed by Physicians, as a Remedy in the Cholick and Gravel by its lubricating, diuretick Nature; and tis the best Liquor in the World for a wet Nurse to drink for increasing a most nourishing Milk. Its strength also is so great, that though it is drank while working, it is as intoxicating as the common Ales or Beers; for by the Time a Man has drank a Quart or two to his Share, he will find it enough to go off with; and if any one thinks fit to make it stronger, (as is often done) it is only adding half a Pint of Sherry with a little Loaf-Sugar and Nutmeg, and then it will not only be strong, but very pleasant; and sometimes entertaining to a Fault; insomuch, that several have been inticed by its luscious, stimulating Taste, and cordial Quality, to a degree of Extravagance, by their too frequent Expence of Money and Time in the Enjoyment of this delicate improv'd Ale. — To all which, I shall add the Opinion of an experienced Physician who has drank of it, *viz.* I take the *Devonshire White-Ale* to be a very pleasant nutritive Liquor, and well fitted to pass the several Secretions of the

the Humane Body; not only by its consisting of such rarify'd adhæſive Particles from the Saccharine Juice of the Vegetable, but its being drank in a particularly agreeable, brisk, and smooth State, in Taste not unlike our first Nutriment, which certainly renders it easy of Concoction in the Stomach, and being moderately taken, it may justly claim a Place in the first Class of dietetick Restoratives.



C H A P. XI.

*A Scheme for Brewing strong Malt-Liquors
after a new improved Method.*

PROCURE a strong, sound, fine Wort, by using good Straw-dried Amber-Malt, just broke; pure, soft, running, or rain Water, in a right Degree of Heat, that is, just before it boils, and stirr'd together no more than is absolutely necessary to keep from Balling, letting it stand under a Cover of fresh Malt its due time in a double Mash-tun; I mean, a lesser One, put into a Larger; the Former to be exceeding smooth withinside, and to have four Feet, either fixed or moveable in the Latter, with a proper Brass-Cock, long enough in its Barrel to screw through both their Bottoms, and a Strainer to be fastned to one End every time it is us'd; or, which is better, the Inner-one to have a false Bottom as in the common Way: The Cavity or Distance between the Tuns should be from six to twelve Inches or more, according to their Size; their Tops to be of an equal Height, and to have another common Cock to fix in towards the Bottom of the outer Tun, to draw off the Water at pleasure; pouring boiling Water in so as to encompass the inner one very near as high as the Mash: Then when the Wort is let go, to receive it in a Goose-quill Stream upon good new Hops well rubb'd between the Hands, setting the

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first Wort so received with the Hops aside, continuing to lade over by Hand-bowl-fulls hot Liquor enough for a second Wort, which must be received on rubb'd Hops as before: Then strain and mix both Worts together, displaying them thin to cool; this done, receive a little of it into a clean Hand-bowl, or rather well glaz'd earthen Pan, (and indeed were earthen Ware, such as we call the Stone-sort, made use of throughout the whole Management, it would be much the better) wherein is a sufficient Quantity of good fresh Yeast, and mix them well together; this Mixture put into your Barrel, Kilderkin, or other Vessel being thoroughly sweet and dry, and let the Rest of the Wort run as fine as possible upon it, till the Vessel is full and the Whole well mixed. After a due Fermentation, put away what has work'd out, and fill up the Vessel with the Infusion of Hops, as hereafter directed, stopping it up as close as may be, excepting the Top-vent or Cork-hole, in the upright Cask where it work'd out at, over which paste a Piece of brown Cap-paper, and so let it remain, 'till upon Pegging it at discretion you observe it comes fine: Then, if you would keep it longer, have ready another Vessel of the same Size, into which rack off your Drink, and at the same Time put into it three Parts of parch'd Wheat, and one of whole malted Horse-beans freed from their Hulls, or Dumplings, made after this Manner, *viz.* Take fine Malt, Rye, and Bean-flower, (if the two last were malted, they wou'd be the better,) each equal Parts; mix them up with a strong Infusion of Hops, or some of the same Drink, into a Mass, out of which form Dumplings; then bung it very tight, and keep it in a cool Cellar for three or four Months or longer, and you'll enjoy a fine, sound, sparkling, pleasant and wholesome vinous Liquor from the Tap; or, you may then again rack and bottle it off for Use.

The Infusion of Hops.

For this Purpose it would be very proper to have a large Vessel made of Copper and well tinn'd, in the Shape of a Coffee-

Coffee-pot, wide at Bottom and narrow at Top, with a Spout in the Side, having a Strainer next to the Body, and a Screw-Top to it; likewise, a Head to screw on: Into this Pot put your Hops, being first well rubb'd between the Hands, with a little Salt of Tartar, (a Quarter of an Ounce to four Pounds of Hops,) and as much fair Water as will cover them well; Let it stand all Night cold, and the next Morning set it over a gentle Fire so as to boil up; take it off and let it stand till cold (the Tops being close screw'd all the while;) then pour off the clear Liquor, without pressure, through the Spout, which immediately pour gently into the Vessel, by the Help of a long, narrow spouted Funnel to reach down into the Drink, without much damaging the Head of it.

The Reason why I deviate from the common Way of Brewing is, that it is a justly received Maxim among the most Judicious, that the more light, pure, soft and vinous our Malt-Liquors are, so much the more are they homogenous, and better adapted to pass the several Secretions of the Humane Body, and consequently the more wholesome: Therefore this being our Business, In the first Place I observe, that long Mashing (as commonly practis'd) renders the Wort liable to several Accidents, especially, according to the Season of the Year it is perform'd in; but one more particularly of impregnating the imbib'd Liquid, with so much of the farinaceous or gruelly Part of the Malt, as not only to induce an Acidity, but likewise a Ropiness in the Drink, which I take to be owing chiefly to this erroneous Management; because it must be granted, that it is a due and regular Degree of Heat, (*cæteris paribus*) that causes the Grain to emit its Vertue; now by long Mashing, by and by the contrary Principle gets the Ascendant, and so chills and stagnates it, as to bring on this vicious Property, which, the longer it is thus kept neither hot nor cold, it is the more exposed to. Therefore, I have recommended this new Method of a double Mash-tun, whose outer Part by being filled with boiling Water as soon as the Mash is set, so facilitates the Operation by way of *Balneum Mariæ*; that
before

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before the incircling Water is cold, the Wort may be let go : And in Winter especially, this must be of considerable service, because you may keep the Water in what Degree of Heat you please, by running it off as it cools, and still adding more boiling. In order to this, you should have two Coppers employ'd, to be more certain in the Heat of your Liquors, and to expedite the Performance; which is a Matter of no little Moment, seeing it is so essentially necessary in avoiding the aforesaid bad Accidents, and procuring a pure, sound, vinous Wort. Again, boiling Malt-Liquors, though so customary, (in my Opinion) frustrates our Expectation; insomuch, as it certainly hardens and thickens them, which is one chief Reason why they are commonly allotted so much Time to digest in the Vessel, in order to break and divide their cohesive mummy Particles; which are much better primarily prevented by not boiling the Wort at all, notwithstanding the common Objection, That without boiling, the Liquor will be raw and not keep: To which I answer, that the Liquor has before received due Maturation in the Copper and Mash-tun, besides the after Digestion and Rarefaction it acquires in the Vessel by Fermentation and Age. And as to its being more liable to decay; it is certainly, not the Boiling that preserves Malt-Liquors, but their Spirit, which is obvious to a mean Capacity; and could we possibly extract the Quintessence of the Malt without it, I should much rather chuse not to use any Heat. Lastly, in order to enjoy Malt-drinks, that are to be kept any Time, in a sound, fine and mellow Condition, I have found it very necessary to free them (as soon as thoroughly digested and fine in the Vessel) from their gross Sediments, or common Lee, which, from it's yeasty Particles, &c. never fails more or less to damage such Drinks, especially the pale Sorts by inducing an Acidity, and rendring them liable to fret and become foul upon Alteration of Weather; therefore a proper artificial, alcalious Composition substituted in its stead, prevents these bad Accidents, and very much preserves and meliorates the Liquor it is put into.

Examples

Examples to illustrate the great Advantage of Infusing the Hop in a close Vessel, and not boiling it in an open Copper.

By this I engage my self in an Article, hitherto omitted by all others, and yet I think it a very Capital one; by reason the first flowery Spirit of this aromack, fine, oily Vegetable is of such an excellent Nature, that the most learned Naturalist allows it to have no *Succedaneum*; and therefore I endeavour'd to contrive a Way (that I have experienced) to confine and preserve its noble Quality entire, which cannot possibly be done, where there is an open Evaporation allowed the Hop; and though I have all along hitherto in my two former Treatises encouraged a short Boiling of fresh Hops in order to their answering this great End, yet believe me, it is only doing the Thing in part, that even then is a thousand Times preferable to the filthy, unwholesome, old Way of boiling them two or three Hours; which as I have remarked, never fails of extracting the Worser and losing the better Part of this fine Ingredient. So that this, like the best of many other Things, may be perverted; as I can prove by many Examples, of which the following shall suffice, *viz.* There is a certain Plant call'd *Daucus* or Wild-carrot, which grows plentifully in some common Fields, about knee-high, with a bunchy Head, in the Shape of an Onion in seed; and is brown good part of the Winter; the Seed of which is a Carminative, and has several other excellent Qualities; particularly two, one of a bitterish, and the other of a peachey Savour; of which Seeds take half a Pint and boil them in a Canvas-bag in a Kilderkin of Ale-Wort half an Hour, and they will not fail to give it a fine Relish, and keep it sound some time: But if you take the same Seeds at the End of that Time, and squeeze them into the Drink, there will come out an unsufferable, ill palated oily Juice, that will spoil all the Liquor it is mixed with. The same it is more or less with other Vegetables, the Hop in particular, if used after the same Manner,

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ner, or by too long boiling, and evaporating its best Part or Spirit by the Steam. Somewhat agreeable to this, is the modern Practice of preparing some Medicines from Vegetables; the Vertues of which were heretofore directed to be obtained, by decoction or boiling as in the *bitter Decoctions*, and that of *Sena*, of our old Dispensatory, but now (among other great Amendments and Improvements by the learned Faculty) they are expressly and more elegantly order'd to be infus'd.

A certain Virtuoso who once dealt pretty largely in the Distilling Business, and was noted for his Skill in Meliorating our *English Brandy*, so as to render it little inferiour to Foreign, used the following Method, viz. to hang a pretty large Piece of dry Florentine Orrice-Root by a Pack-thread, or otherwise, in the Top-Part of an Alembick, so as the boiling Liquor may not touch it, and it will give the Spirit or Water so drawn off, a fine, agreeable, Rasbery, vinous Relish and Flavour: But if you boil it in the Liquor, it will have none of this delicate Quality, but instead thereof, impregnate it with a very disagreeable, harsh, earthy Taste. So likewise, if you infuse this Root cut in Slices in a little *English Brandy* for about six or eight Hours, it will much improve it; but if any considerable time longer, it will affect it in the disagreeable Manner aforesaid.

But for a further Proof that Hops should not be boiled in Wort, but infused, I add the following demonstrative Reason. A Distiller boiled off a Brewing of strong Wort in his Still, and for an Experiment, as soon as he had put in his Hops clap'd on the Head, and there came off by the Worm only a bitter Water saturated with the pure aromattick Part of the Hop.

Now as some may not have the Conveniences of using the Copper-pot with its screw Head as I have before described; such may have one made of Tin instead thereof; or I would advise you first to rub and then to put one, two, or more Pounds of Hops with the Salt of Tartar into an earthen glazed Pot, allowing
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Room enough, and made somewhat like a Churn, broad at Bottom and narrow at Top; on these pour so much pure, soft Water as will wet and cover them well, so that a Quart may be got off each Pound, and immediately stop it up with a Cork, or some other thing to keep all the Steam so in, that none may make it escape; set it over a gentle Fire, and let it boil up; then remove it and set it by till thoroughly cold: Then pour the bitter Liquor off into the Cask as soon as it has done working, and bung it down tight directly. But here in course will arise an Objection against this Procedure, because the Hop is to be infused in hot Water and not Wort, and so must make the Drink weak and raw. To this I answer, That though I have here recommended Water rather than Wort, yet every one is at his Liberty to act as he pleases, and upon Trial, I believe, will be convinced, that pure soft Water is the best *Menstruum* or Vehicle to penetrate into, divide, and imbibe the viscid or cohesive Part of the Hop by Infusion, especially as it is assisted by the Salt of Tartar, which is a great Alkali and very wholesome; so that by thus confining the Steam of both Water and Hop in a glazed earthen, or other Vessel, the Quintessence of the Hop will have a pure Extraction as soon as cold, after the same manner that Teas are made, whereby the finest Parts of this most serviceable Vegetable will be obtained, and the earthy, unwholesome Qualities left behind for the imbittering of Small-beer, or doing a good Piece of Service by giving them to a poor Neighbour; whereas if hot Wort was used instead of Water, it would not be able to receive such a strong Tincture from the Hop; because both the Hop and Wort are two oily Bodies that cannot so easily incorporate as a thinner Liquid: Nor can so much Water as a Quart to a Kilderkin of strong Drink be of any Signification, since it is loaded with the full Strength of the spirituous Hop, that, to preserve in the best manner, I put into the Barrel as soon as it has done working, and immediately bung it up in order to conserve its

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Spirit intire, which if mixed with the Wort that is to be afterward fermented, in course there will be a great Expence of those Spirits, which may after this method be truly perserved.

*A further Account of Brewing Malt-Liquors
without Boiling.*

IN my second Book, Page 69, I largely wrote on this Article, and yet think myself under some Obligation to enlarge on the same Subject here, by further recommending this advantageous Method to the World, as being very profitable, pleasant, and wholesome. A Miller near *Chelmsford* in *Essex*, is famous for brewing his Drink after this Manner, that he makes so strong as to burn if thrown into the Fire, and is always fine. His Way is to boil the Hops in Water, and after they are strained out, he puts that Water into his Tun for the first Mash; and if he has occasion for more hot Water, he boils fresh Hops, strains them out, and puts the Liquor over the Goods, as he did the first time; because the more terrene, and feculent Parts of the Hop commonly extracted by Ebullition, are by this Method as it were filtered out, and left behind in the Grains; for there is a natural Contact between the earthy, Phlegmatick Parts of the Malt and Hops, and so *è Contrâ*, as the Salts of the Yeast sooner joyn or have a readier Contact with those of the corrupted or fermented Grain, *i. e.* Malt in Wort, than they do with Molosses, or other Bodies that have not more or less undergone a Prefermentation: After this he cools his Wort and ferments as usual, but without boiling it at all. And also in *Hertfordshire*, I know a Man that has brewed all his Drink for his own Family many Years after this Manner, with great Reputation. The same likewise I found practised at *Froome*, and some other Parts of *Somersetshire*, and is certainly an excellent Way, provided this can be done without losing any of the Hop's Spirit by Evaporation: Where-

Wherefore instead of boiling them in an open Copper, they should be infused or boiled under such a confining Cover, as will secure their Vertue; then if they are strained out, and the Water put over the Malt, the Wort will certainly be the better; and in this Case fewer Hops will do, because their whole Strength is thus intirely preserved. Wort is better for not being boiled, because boiling thickens and hardens it; and Water also by evaporating the lighter, softer, and more pure Part. Though I can't say that any Spirit evaporates in boiling Wort; because if the Grain is so opened as to emit any Spirits in Malting, it is thoroughly lost in the watering and drying, as was fairly demonstrated by the Experiment of the Still above mentioned in the Account of infusing Hops. Also the common Objection of its being raw, and not fit for keeping, I have already obviated by this reason, that it is not boiling that matures and preserves Malt-Liquors, but a right, and due Fermentation, and its Spirit; which is likewise further confirm'd by the Practice of a certain wealthy Virtuoso near *Bristol*, who constantly brews his Ale and Table-Drink without boiling their Worts: and, in his own Words, He sometimes keeps his Ale near twelve Months, and believes both to be as good as any of his Neighbours: Notwithstanding he is very particular in another Respect, which is, that he never puts Hop or any other Bitter to either Sort, and affirms it to be pleasanter and wholesomer without; tho' he formerly us'd to brew in the common Way.

C H A P. XII.

Of Worts and their Improvements after a new Method.

WORT is the Oily, Spirituous Parts of the Malt, obtain'd by Infusions and Washings of hot Water, that lye and soak with the Grain, one, two or more Hours; which gradually opens the Pores, whereby it the more freely imparts its Virtues by the further Assistance of a Cover of fresh Malt, which here prevents the Escape of the finer, softer, and most penetrating Parts of the Water by Steam, and causes a more equal Distribution of them throughout the Body of the Mash, by a due confinement of the Heat; and being swell'd and saturated to its utmost distention, returns the over-plus Liquor laden with the sweet, balsamick, nourishing, pleasant Parts of its Flower, and so continues to emit the same in a regular Tincture, by the several Ladings over or Washings that leisurely follow, and are constantly discharged by the Cock without stopping, till the just Quantity is got off in a fine transparent Stream. Now to enjoy this virgin, delicate Liquor so obtained, free of all Adulteration, much Waste, and in its utmost Purity, is the Design of this Part. To this End, I put fresh Hops first rubb'd well between the Hands into the Tub under the Cock for the Wort to run on, all the time it is spending off, and when I have my Quantity of first Wort, I empty the Tub of that and the Hop, still continuing without intermission my Leakings over and Runnings out on another Parcel of fresh Hops for my second Wort; and if after that small Beer is to be made, more fresh Hops should be employed to receive it all the time it comes away: And when I have got possession of a genuine Wort, it is to be managed as before, and as hereafter I shall direct. Now I am to account for the Excellency of this Method,

thod, and to show that it transcends that practised by me at my great Brewhouse; where after the first Piece of Wort was discharged off from under its Capping of fresh Malt, all the after Worts were obliged to be exposed an Hour, or near one each, on the Goods, to infuse and bring away their Strength; about half an Hour running off, and almost half an Hour longer before it can be pump'd out of the Underback into the Copper. In all which three Ways the Worts sometime suffer in their better Part, which I prove by the Accidents of pricking, or a little souring of the Wort, that frequently happens in the Mash-tun or Underback, especially in hot Weather. From hence it was that my Malt-Liquors would sometimes suddenly acquire Staleness, because truly speaking, they thus were deprived of part of their original, native Sweetness before they went into the Copper, that is irrecoverable afterwards. But as this ancient Management commonly affects the Wort more or less in its fundamental Principle, but so as at first not to be perceived by the Unwary and Ignorant; it generally likewise escapes the Censure of the Drinker as to its true Cause, who falsely imputes the Badness of it to the Underboiling it, the Length of time in keeping it, or to the Want of a sufficient Quantity of Hops in it. However, it is certain that such damaged Wort is of dangerous Consequence to the humane Body; for if the Wort is sick, it cannot fail of communicating its unwholesome Quality to the Blood; and therefore I hope my Caution will give a just Idea to my Reader of the too commonly over-look'd Mischief that accompanies such ill brewed Beers and Ales, and so prevent the Loss of Health, Time, and Money, that many have been brought under, by not knowing the Source and Spring of their Illness; for it is certain that great Errours may be insensibly committed in the smallest and meanest Preparations, for want of rightly understanding the Forms of Nature. So that I think myself obliged to write against the necessitous (though common) Way I formerly

merly followed, in suffering the Wort to lye in the open, broad Mash-tun, and Underback of my great Brewhouse an hour and a half, or two hours, without so much as a Hop in it to secure its innate, tender Virtue, or Sweetness, against receiving prejudice from Time, Utensils, Heat, and *Effluvia's* of corrupted Air. On the contrary, the Method of obtaining Wort by Ladeing over hot Water proves the vast Benefit that it receives, when intirely preserved in its pure, natural State; as by such quick Dispatch, and the Tincture of the Hops it surely does. For it is certain, that both these Conveniencies potently oppose and resist Acidities and other ill Qualities, which often have proved the Bane of humane Bodies, and in their Room maintained Malt-Drinks in a wholesome, pleasant, mild Condition from their first running out of the Mash-tub to their last Consumption. Which Management, is also much better than that practised by some common Brewers, who to secure all ~~safe~~, lay a good Quantity of Hops in the Hollow between the false and fix'd Bottom of the Mash-tub: But by their Leave they are wrong in so doing, because here their Hops are obliged to lye the whole time of the Brewing, which consequently must extract the foul, disagreeable, earthy Part of them, and do the Drink great Damage. For herein consists the nicest Point in extracting the Virtue of any Vegetables, Minerals, &c. especially such as require several Digestions; first, by a proper *Menstruum* to obtain, and afterwards to preserve their fine, purer, and better Parts, so as at the same time to avoid their more gross and terrene Qualities: In this, I say, consists the Perfection of all such Artificial, Spirituous Liquors that are to be procur'd by Infusion, Decoction, &c. Thus, Take a common Fire-shovel and heat it, then put Coffee-berries on it, and heat them also till they sweat; while this is doing, set some Water over the Fire in a Coffee-pot, when heated, throw it away, and dry the empty Pot on the Fire; then take the Powder of the heated Berries and put into the
warm

Warm Pot, and immediately Water heated under a close Cover and just before it boils, over it; and then this previous, gentle Heat by the present Admission of igneous Particles into the Pores of the Berries, will so distend and divide them, as to cause them much readier to communicate their purer, and lighter Parts to those of the heated Water; and in three or four minutes standing close cover'd will afford a pleasant, strong Liquor without partaking any of the harsh, acid, gross Part of it, which the common Management yields more or less by using the Powder cold, boiling and standing double the time.

Worts prepared by Digestion.

By this Way, as a late Writer observes, the Particles of Bodies are extracted, which are more light than the terrestrial Ones they proceed from, and that by a certain *Menstruum* that they intimately mix with. To this end, a gentle Fire is commonly used, that the Corpuscles which are most volatile may separate as it were of their own accord; for a fierce Fire forces out the Fæces as well as the finer Particles; and if it does not abate the Strength of the Liquor, it will not fail of fouling it; according to which Rules, says he, there may be practised a Sort of curing strong Worts, thus, viz. Put your Wort into the Copper, and on it fit a blind Head that may be closely secured with a Paste, which by a moderate Fire may be digested Twenty or more Hours, with a sufficient Quantity of Hops, or some other Ingredient instead of them, after which it may be fermented as usual. By this Method, either Malt, or Treacle Wort, is said to be brought into an excellent, drinkable Condition, without diminishing its Spirit or fine Part. But I can't joyn in Sentiment with him on this Account, because by this long, close Stewing, the whole Power of the Hop is incorporated with the Wort to the last degree, never to be separated while it is Drink; and then

then it will be attended with many ill Consequences, as I have before observed: Besides, the Wort here is heated or boil'd in the dark in a very blind Manner, and may thus obtain too thick a Body, which will much take off that fine, vinous Consistence which all Malt-Liquors should have: For Wort, though it has by a proper Length of Time boiled into innumerable Particles; yet by being afterwards boiled on too long, the whole Body of it will again reunite and become an intire Consistence, as it was before it broke into such Particles. But I must own, if this Operation, can be truly adjusted, so that the Wort and Hop may be boiled to a true Crisis under Cover, it is an excellent Way, and I am a Votary for such keeping in the Steam of Wort; though there is an Objection made by some, that the Wort can't loose any Spirit in boiling openly, because the Liquor was never yet fermented. To this I answer, that though a Spirit can't be extracted from Wort, till it is fermented, yet its certainly true that the softest and finest Parts of either Water or Wort will fly away in open and long boiling, that were intirely necessary to incide and dissolve the viscid Body of the fermented Liquor, and make it healthful to the Drinker. Therefore I think this same Author more in the right when he advises, that as soon as Wort and Hops are put into a Copper, there should be a large blind Head fixed on the same, that is to be luted so fast as nothing can evaporate; Then gently boil the space of one or two Hours as the Strength of your Liquor is; then remove the Head, strain the Hops, and let out the Wort into a Cooler, so, says he, you have a Liquor in which is the full Virtue of the Grain and Hop. But in my humble opinion he has not hit the Mark yet; for though such Confinement preserves the Steam, and some Virtue of the Wort from flying off, it is an obscure and uncertain Way; because there is no seeing when the Wort breaks, nor an Opportunity of taking out the Hops in due Time, so that there ought to be a better Method contrived,

trived. To which End I advance my Notion as follows, viz. In September 1736, as I was travelling through Norfolk, I happen'd into the Company of an eminent common Brewer, to whom I was hinting the great Service of confining the Steam of Worts while they boiled. In answer to which he told me he had attempted the very thing, by fastening his two wooden Doors just above the Curb of the Copper, and also thought he had secured the square Hole in the Middle of his Copper-back; accordingly he ordered the Stoker to boil the Wort, as usual; but it was not long before the Board on the square Hole gave way, and the Wort bursted out with such Fury that it boiled over on the Ground, and had like to have scalded the Fire-Man; which so affrighted him that away he went, and could never be perswaded to live with his Master afterwards. Here I observed his Copper-back to be but three Foot higher than the Copper, which consequently was too short a Distance for such a Tryal: for in this Case there should be such a space allowed as to weaken the Ascent of the boiling Wort and Steam: So that I am of Opinion nothing less than four or five Feet high Vacation ought to be allowed for this Performance, in order to break the Force of such an Ebullition, by thus giving it Room enough to expand, and with all the Advantage that can be given to the Strength of the Brick and Wood-work about the same. By this Contrivance you may adjust the true Time of boiling both Wort and Hops, and that by only turning the Cock at the End of your Copper-Arm, and see at any time in a little drawn Wort, in what Condition all the rest is; which is far more profitable to the Brewer, and much better for the Drink than boiling a first Wort four Hours with all its Hops, as I heard another did in an open, low Copper, and yet was reckoned the greatest Brewer in the Country he lived in. In fine, the Benefit of this new Way must be considerable, since it's generally allowed, that according to the present common Mode of laying a Back over

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the Copper, with a narrow Hole in the middle of the same for the Evacuation of the Steam, and a Pair of folding Doors at the Front; near half of the Waste of Worts is saved, which used to be lost when boiled in an open Copper.

How three Men in Partnership Brewed and sold Ale without buying Malt or paying Excise.

This Scheme as I was credibly informed, was invented by a *Yorkshire* Man, who buoy'd up with the Assurance of Success, proposed it to two of his Country Men, that readily came into his Measures. For this Purpose they took a ground Room in *Grays-Inn Lane*, which they furnished with a large Tub, a few Casks, and a small Kettle. Then they proceeded and bought a Sack of the coarsest Sugar, putting the same into the great Tub, first charged with a due Quantity of cold Water that they mashed and mixed well together. To this they added an Infusion of Hops, so made by pouring scalding Water on a Parcel in a Firkin, that when soaked enough they drew out at the Tap-hole, and work'd all with Yeast as is done in Malt-Liquors. When the Drink was ready, they carried it out in the Dark to a Cellar in *St. Martins-Lane*, where they sold it for common Ale at a Price that invited good Custom, and that brought in such a Profit as soon made two of the Partners become extravagant Rakes to the Ruin of their dark Enterprize.



C H A P. XIII.

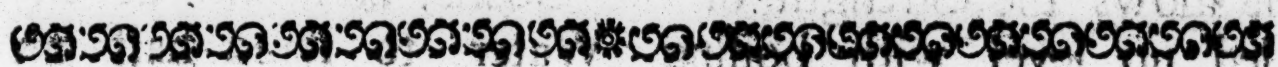
The Barnstable Way of Brewing a Hoghead of fine Pale Ale.

THEY draw off a Hoghead of fine pleasant Straw Coloured Ale from twelve Bushels of Malt, thus, viz. They boil the Water, then throw two Pails of cold

cold into the Mash-tun, and the boiling hot Water on that; then immediately put in the Malt half a Bushel at a time: After stirring it till all is soaked, they Cap it with Malt or Bran, and cover it close to stand three Hours; then see if the Mash is sunk in the Middle which it will sometimes do, and when it does, it shows the Strength of the Goods, and must be filled up level with boiling Water to stand half an Hour after, when it is to be run off in a Goose-quill Stream, which is to be returned upon the Goods again, by a Bowl or Pail full at a time as back as you can from the Cock; for then the Liquor strains through the Body of the Goods, and at last comes very fine; otherwise you force the thick Part down to the Cock: this is called Doubling, which they continue to do for half an Hour, then stop and let it stand half an Hour longer in Winter, but not in Summer; then they rub four Pounds of Hops very fine into the Kieve for the Wort to run on; they don't draw it off too near before they lade over more boiling Water out of the Copper, that is to be continued till you have your Quantity of Ale Wort, which with all your Hops is to be boiled till the Liquor breaks or curdles; then they empty all into large earthen long Pans or Coolers that they work when cold with the same Hops all together, thus; *viz.* They put a little Yeast (as little as may be, and that not a Day old if they can help it) to a Parcel, and mix that with all the rest to work Twelve or Fourteen Hours, and then they directly strain it into the Barrel, where they keep filling it up with fresh Wort till they leave it full at last. When the Fermenting is finished they paste a Piece of brown Paper over the Bung-hole for a Fortnight, which will very much conduce to its fining by its having a little Air, and then bung for good with a wooden Stopple. Thus they'll draw their Ale perfectly fine in three Weeks or a Month at most.

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N. B. They never Mash here above once for their strong Drink, and seldom make small because of its great Cheapness. Therefore they think it turns to a better Account to leave a Strength in the Grains for feeding their Swine.



C H A P. XIV.

*Working Beer and Ale after a new Way to
their great advantage.*

YEAST is an Acid, as appears by its soon turning sour, and consists of a great Quantity of subtil, and spirituous Particles, wrapped up in such as are viscid: When therefore this is mixed with Liquor, it occasions an intestine Motion by the Interfering of Particles of different Gravities, as the spirituous Parts will be continually striving to get up to the Surface, and the viscid Ones continually retarding such Ascent and preventing their Escape. So that by these two concurring Causes, the Particles extracted from the Grain will, by frequent Occursions, be so comminuted, as continually to encrease the more subtil and spirituous Parts, until all that can be made so by Attrition or Fretting are set loose from their viscid Confinements, as a learned Author plainly demonstrates. It is also influenced by the Air that in Summer is warm, light, and thin, and greatly promotes it; in Winter it's thick, cold, and heavy, and much retards it. Also in Spring and Summer, the floating Particles of the Air that are of the same kind as those in the fermenting Liquor, joyn them with their Strength, and make the Working more violent. So Malt-Liquors made from Beans, Oats, or other Vegetables will ferment higher and be stronger, if brewed when they are in blossom.

After

After the old Way.

As I have all along in the several foregoing Operations endeavour'd to preserve the more pure, light, and subtil Parts of the Water, Malt, Wort and Hops. I shall here likewise do the same in Fermentation. In the Working of Beer, and Ale the Spirits have the greatest Opportunity of making their Escape, and therefore here is the place for your chiefest Care, that the Fermentation may be brought on cool and leisurely under the close Cover of a Lid and Cloaths to preserve the Spirits; for if you put your Nose over it while it is working, you'll find the Strength ready to suffocate you; which plainly shows it emits a great deal of spirituous Effluvia, that will fly away if not kept well in, as you may also prove by putting a lighted Candle a little down under the Cover and it will extinguish it. But if the Fermentation is not thus confin'd, your Candle will remain lighted, because the Spirits will then evaporate freely.

After the new Way.

This is very different from the old; for by this the Use of Tubs and working Tuns are wholly laid aside, on account of the great Loss of Spirits that such open Utensils expose the Drink to, that here have such a free communication with the circumambient Air, as to be influenced by it in a most plenary Manner; so that if too free an Access to the aerial Particles is detrimental to the Malt-Liquor, here is full Liberty for their Action. To prevent which, take a little Wort before it is quite cold, and mix it with some Yeast; when it is fermented, put it into a Hoghead or Butt, and on that let the Wort run out of the Back, or pour it out of your Tubs as fine as possible, and as cool as the Season will permit. Then stop up the Bung-hole in the Head with a turned Piece of Wood wrapped round

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round with wetted brown Paper, and let the Yeast work out of a common Cork-hole made in the Front of the upright Cask within about an Inch of the upper Head, by a little Piece of Leather nail'd under it, and a wooden Spout under that, to convey the Yeast into a Tub on the Ground; so will you enjoy a Drink much stronger, finer, and better relish'd, than when work'd and tun'd after the old Fashion: For this Way causes the Beer or Ale to taste smooth and retain a brisk, lively Quality to the last. But then such Working must be in a right manner, neither too much nor too little. If in the first Degree, it will be apt to boil in the Cask in Summer almost like the Motion in a Copper, and bring it under a stale Hardness, make it taste harsh in the Mouth, and give too deep a Colour to the paler Sort of Drink: For this Reason some will follow this Method of Fermenting it all together in the Cask only in Winter and not in Summer. If in the second Degree, it will be always sputtering and never fine. But the Danger of these Extreams will not be very hazardous where Care and Judgment attend the Work, and so may be performed at any time of the Year with safety, tho' the Equinoxes or most temperate Seasons are certainly the best. Besides which, here is a great deal of Waste prevented that always accompanies the Vat, Tun, Pump, Pail, or Jett, used in working Malt-Liquors after the old Way. And if there is almost half the Waste of Wort saved in boiling Malt-Liquors by a Copper-back, there is also a Waste of the Drink prevented that otherwise would happen if work'd in the open Tub or Tun: And to prove the great Benefit of this Method, make but an Experiment even in your small Beer, and you'll find, that, work'd in the Cask, stronger, pleasanter, and will keep longer, than that first work'd in an open Vessel, and afterwards put into the Barrel, which consequently must likewise render it much wholesomer, than Drink fermented in the open Tun, because by this Means it is furnished with a great Plenty of its own original Spirits, that otherwise would cer-
tainly

tainly make their Escape, and the Liquor become flat and weak. So that in my humble Opinion, (and I hope it will become general in a few Years,) no Drink made from Malt will be esteemed, but what is brewed by infusing or boiling the Hops a little While, according to these my Directions, and work'd only in the upright Cask, as I have here directed.

To forward Fermentation.

If you have but little, or if you have bad Yeast mix a little Sugar, Flower, and Salt with it, and some warm Wort, or Beer, and it will raise it, and make it go a great way in working Beers and Ales. So it will if mix'd with Grounds of strong Beer, and will make it fit both to bake Bread and work Beers and Ales, and the sooner if you let the Mixture lye by a Fire. But some for a -Make-shift will mix only hot Water and Sugar with stale Yeast, and recover it fit for Service.— Others will knead Bean Flower with Water into a Dough, and put it into the Wort.— Or if you put Wort in a Vessel on its Grounds, it will ferment it, provided it is not sour; but the Grounds won't work the Wort if put among it in an open Tub.— Others when Drink is backward in working will put some Stone-Lime into it.— Salt, Pepper, and Flower mix'd together will make Drink work that would not before.— Powder'd Ginger alone will help.— Or Ginger, Brandy and Flower mix'd together.— Or a Gallon Stone-Bottle fill'd with hot Water.— Or in case you can get no Yeast, Honey, Sugar, Leaven, or Treacle, will do it alone.— Or Flower, Salt, and Whites of Eggs mix'd with Treacle.— Or by putting a Chaffing-dish of live Coals under the bottom of a Tub or Tun.— Or by using some Salt of Tartar.— But in particular be very careful not to break the young yeasty Head, for this Cover helps the viscid Body of the Wort to keep in the Spirits, for all Fermentation is much promoted by rest.— Also to supply the Want
of

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of common Yeast, in Gentlemens Houses distant from Towns, I have heard, they cut and beat Isinglass small and fine, which being four Ounces in Quantity, they mix with two Quarts of stale Beer; then let it stand in Infusion till dissolved, but without stirring it; then draw or pour off the Beer, and keep the thick Part in a Pan before the Fire, so as just to keep it warm, and in about two or three Hours time, it will rise and ferment and look like Yeast; and then it is fit to use, either to work Drink with, or to bake Bread.— If your Yeast is sourish it will be apt to fox your Drink.— If you work your Drink too hot, you may expect to have it quickly fall, and either fox, or be flat, and suddenly stale.— You may make as much Yeast as will lye on a Crown-piece work a Thousand Barrels, by first putting it into a Pint, then a Quart, and so on.— All new Drink must be tun'd before it falls, or else it looses its Spirits.— Some are so ignorantly covetous that they will reserve out some raw Wort, and set it a working in order to save the Waste of it in boiling; the Consequence may likely cause a sweet and bitter disagreeable Taste in the Drink, and afterwards bring it into a prick'd Condition.— Yeast will be good two Months together, if cold Water is put upon such thick Yeast as it is settled at the bottom of a Tub, and pour'd off once a Week, and fresh immediately put on.— Or when the Drink is working, put into the Vat, a Whisk, Hasle-red, Broom, or a Branch of Juniper, or Furze, and let it lye all the time it is fermenting; then take it and hang it up in a dry Place, and though it be Six or Eight Months before it is used, it will be very sweet and serviceable for the next Brewing.— Or Bottle the Yeast after the manner I have formerly directed.— Or when strong Drink works slowly through the Viscidity or Clamminess of the fermenting Liquor, or Coldness of the Season, a few live Coals or new made Wood-ashes will remedy that Inconvenience; by dissolving the oleaginous Particles and separating them, the alkaline Salt in the Ashes being excellently adapted for this purpose; the
same

same effect will be produced by a little Salt of Tartar, or an Onion dipp'd in strong Mustard, or a Ball made of Quick-Lime, Wheat Flower, and the White of an Egg beat up into a Paste, a Piece of Which being thrown in will occasion a new Fermentation: But these last are only to be used when you are sure this Defect proceeds solely from the Thickness of the Liquor; for otherwise these volatile and fiery saline Substances will so break and divide the Texture of the Fluid, that with themselves they will make way for all the contained spirituous Particles to fly off at the Surface.

To cure new Drink damaged by the Frost.

If you are necessitated to brew strong Drink in frosty Weather, it is a great Chance but the Frost takes it in the working Vat, especially if you should let the Wort be ever so little too cold before you put the Yeast to it; there is then no preventing it. You may know when this Misfortune has happened to your Drink by its not working so kindly as other does; for it will ferment a fresh upon a succeeding Thaw, even if it has been in the Cask for a Month or two, and a Frost should have continued all that time; however this is a certain Rule to know it by, *viz.* when upon tapping it you find it very sweet, somewhat like a Syrrup (though you have allowed the sufficient Quantity of Hops to it as usual) and is commonly foul: Such Liquor will never be well tasted as other Drink, keep it ever so long, without using some Remedy.— The usual one to a Barrel of such Drink, is to make a little more than a Pail-full of fresh Wort, into which put a good Quantity of rubbed Hops, and boil it about half an Hour, so that it may be extraordinary bitter; and when it is cold enough, draw off a Pail-full of this damaged Drink and fill up your Cask with the bitter Wort in its stead, and it will work a new.— The Fermentation being over, stop it up, and let it stand for a Month, And if upon tryal you find it has come to, well,— But if it
I still

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still retains its sugarry Taste, then get ready another Barrel sweet and dry, into which rack off this Drink, and put into it half a Peck of parch'd Wheat, and a Pound of good Hops gently dry'd before the Fire, rubb'd a little and tied up in a fine Net; this hang in your Barrel by a String fastened to the Bung, which drive down tight, leaving only the Vent-hole open for a Day or two in case any Fermentation should ensue; afterwards stop close, and in three Weeks or a Month's time, it will be cur'd and fit to draw.

N. B The Pail-full of damag'd Drink may be added to your Table-beer.

To check a forward Fermentation.

In *Northamptonshire*, and many other Places, they reserve a Piece of raw Wort for this purpose, and to prepare it for keeping, they get it off the Lees as fine as they can, and lay it very thin, else it would ferment of itself by the heat of the Salt and Sulphur contain'd in them. In Summer time when the Beer or Ale ferments too high, they mix a Parcel of this raw Wort to lower it, and so on in the same manner for several Days, which every time adds new Viscidities, that entangle and keep the spirituous Parts from flying off, at the same time breaking the cohesive Principle into finer Particles, whereby it makes the Drink so much the lighter and fitter for a more easy Digestion: Contrary to that worse way of beating in the Yeast, and loading the Drink with a heavy, clogging, unwholesome Matter: by which Management, the raw Wort will keep sound more than a Week, and is so serviceable for improving Ale, that its constantly practis'd throughout the Year; for in Winter they commonly heat their Parcels to invigorate the new Drink, that it may potently resist the Severity of cold Weather; and then, as I have several times observed, the Malt Liquor will knit and sparkle in a Glass though drawn out of a Barrel. And I must own I think they brew the best Ale in this County

County of any other. So in the same manner they serve their small Beer that drinks extremely pleasant. In case your Drink works too violently in the Cask, (after my new Method,) then run a Brass-Cock into the middle Cork-hole of your Butt, and draw out a parcel, and in the Room thereof, put as much raw Wort into the Bung-hole in the Head, as will sufficiently check it, or burn Brimstone under or about the Vessel and it will do it directly.— Also Salt, Allum, Niter, Spirit of Vitriol, Oyl of Sulphur, Spirit of Salt, and all other Acids abate violent Workings of Malt Liquors. For the rest see my first Part, *Page 53.*— *Third Edition.* But before I leave this Topick, I think it necessary to add the following Account, as it was related to me at *Norwich*, in *September*, 1736. by one of the same Brew-house. The Tun-man, being ambitious to supplant the Work-man Brewer, contrived to bring about his End by dividing a Lump of Grease, and scattering the Bits into several Parts of the Tun, that then had a Guile of Nogg or strong Beer working in it; and though the Brewer left it fermenting in fine Order, yet when he came again, he found it all fallen flat, and only just covered with a thin Creamy Head. Thus this Villain brought the Brewer several times into disgrace, till at last they suspected and detected him in the Action, on which the Rogue fled.— When Liquor is of a thin Substance, and abounds with many subtile, and very fugitive Particles, something of a gross and viscid Consistence must be used to bridle and restrain their too great Activity; To which end, the White of an Egg and Wheat-Flower, old Yeast, and a cool Position, are very serviceable.

C H A P. XV.

Of Brewing Butt Beer called Porter.

THE Water just breaks or boils when they let in a Quantity of cold to keep it from scalding, which they let run off by a great brass Cock down a wooden Trunk (which is fix'd to the Side of the Mash-tun) and up through a false Bottom into the Malt: Then Mash with wooden Oars half an Hour; by this time the Water in the Copper is scalding hot, which they likewise let run into the Malt and Mash half an Hour longer. This they cap or cover with fresh Malt, and let it stand two Hours; then spend away by a Cock-Stream into the Under-back, where it lies a little while till a second Liquor is ready to boil, but not boil, with which they Mash again to have a sufficient length of Wort that they boil at once, or twice, according to the Bigness of their Utensils. Others will make a third Mash, and boil a second Copper of Wort. The first Wort is allowed an Hour and a half's boiling with three Pounds of Hops to each Barrel. The second Wort two Hours with the same Hops, and so on. Some calling the First, Hop-wort; the Second, Mash-wort; the Third, Neighbour-wort, and the Fourth, Blew. Which last being a most small Sort, is sometimes allowed Six or Seven Hours boiling with the same used Hops. When in a right Temper they let down the Worts out of the Backs into the Tun from their grosser Contents, where they coolly ferment it with Yeast, till a fine curl'd Head rises and just falls again, that sometimes requires Twenty-four, sometimes Forty-eight Hours, as the Weather is hot or cold to perform this Operation. Then they cleanse it off into Barrels one Day, and carry it out the next to their Customers, keeping the Vessels filling up now and then in the *Interim*. For making this Drink with a good Body, they commonly draw off a Barrel and a Firkin, or a Hogshead, from a Quarter of brown Malt, and
sell

An Account of the destructive Weevils, &c. 61
sell it for Twenty-three Shillings, *per* Barrel. But this is govern'd by the Price of the Customer ; so that two or three Sorts are sometimes carried out from one Brewing, for with the Blew they can lower it at pleasure ; always observing that the higher the Malt is dried the cooler the first Liquor or Water must be taken or used ; therefore the first Wort governs the second Liquor either to be hotter or cooler. If that was too hot you may know it by its bearing too great a Head or Froth in the Receiver, and so *è Contra* ; a midling Head shows the first Liquor to have been taken right.

C H A P. XVI.

An Account of the destructive Weevils, with several Ways to destroy them.

IN some Counties they call it Bood, others Pope, and Whool. It is a Kind of Beetle about the Bigness of a large Flea, and, like a small Ant, will crack under the Nail like a Flea, and will not only eat the Malt Kernel, but also where they are in Abundance will bite a Person in bed, haunt the Cup-board, and even feed on the Plates where Meat has been eat on. These Insects are the Pest of Corn Lofts, and are such Travellers, that when one is empty, they'l presently make their way to another, unless the Granary stands independant of other Buildings. They don't breed in Winter, only in Summer, and then the Slackness or Dampness of the Malt, which by lying in a Heap, heats, contributes to their Encrease ; so a Wall, that the Grain lies next too, by its giving in wet Weather, will cause a Moisture and sometimes have the same Effect : likewise when Malt is kept two or three Years together in a Loft, the Dust that it acquires may bring on a Heat, and that cause, the breed of this Insect. And why the great London Brewers are not so much troubled with them as the Country, is because

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because they are always emptying and receiving, that so disturbs them as to hinder their Increase. A Brewer in the Country built a Loft that stood from other building, and though he thought himself secure by this Means, yet was it not long before he had his hated Guests; for being necessitated to buy Malt at another Town, he ignorantly bought some Weevils or Whools in it, which to get rid of, he would not suffer any Malt to lie in the same six Months together; this answered his Purpose, for it starv'd them quite. But where they are in great Numbers, and have food enough, they'll destroy a great deal in a little time, beginning at the end of a Kernel, and so eating into the Flower, spoil the Malt and deceive the Brewer; for these as they are nourish'd or encreas'd by Putrefaction, and often unperceived ground with the Malt, and boil'd in the Drink, fox it, and cause it to grow stale and rope, and thus are the Beginning of Corruption, which like Leaven, is continually encreasing till it has brought the Whole under a total Damage.

To prevent.— Screen the Malt now and then from the Dust, and lay it dry against Boards, and empty your Loft in due time.

To destroy great Numbers of them, and keep them under.— Is to shovel the Malt up into a Heap, and they'll all make up to the Top, by which you may take off the major Part and sift them out, then stirring and heaping the Malt again, you may repeat the Work.

A Second Way.— Leave a Peck or less of Malt or Grains on the Floor, and the Whools will come out to feed on them, when they may be shovel'd up. They are most in Lofts at the latter End of the Summer Season.

A third Way.— When the Loft is empty they'll be apt to creep up and lodge on the Walls; in this case, white Wash with a Brush dipt in Water wherein quick Lime has been just quench'd, and it will kill many of them.

A fourth Way.— If the Room can be inclosed from Air,

Air, then you may destroy them by burning Brimstone or Guiny-Pepper in the same, but no Person must be in the reach of it.

A fifth Way.— Is to carry a good Parcel of Horse-Pismires, or the great black Ants, which you may shovel up with some of the Mould of the Hill, and put all into a Sack, which if you scatter in the Loft as soon as the Corn is out, they'll effectually kill the Whools, and afterwards leave the Place.

But for further setting forth the destructive Nature of this poisonous Insect, take the following Account as it was related to me by a Servant who had been brought up under a Person from *Nottingham*, famous for brewing Malt-Liquors. A Victualler hearing of this valuable Servant, used his strenuous Endeavours to hire him. Accordingly succeeding, he employed him to brew a Quarter of Malt. The hot Water being in the Mash-tun, he opened the Sack to put in the ground Malt, when to his great Surprize, he saw vast Numbers of Weevils creeping in the same; however, he put in both them and Malt, and mashed away, but in such pain from the fetid Stink of the Weevils, that he could hardly bear his Nose over the Place, and resolved never to brew there a second time; which he made good, and returned to his old Master again: An Example one would think sufficient enough to open the Eyes of the ignorant Citt and others, who consequently drink great Quantities of such unwholesome Malt-Liquors made from whoolly Malts, as may be inferr'd from what I am going to say, *viz.* The small Town where this happened lies above Twenty-five Miles from *London*, and furnishes large Quantities of Malt to that Place by the Waggon. Now according to the Opinion of some, all or most of their Malt-Lofts or Granaries in the same are infected by the Weevil, and have been so for many Years past, insomuch that they despair of ever getting rid of this their constant Lodger. If then this horrid Creature breeds in such abundance in one small Town, and accompanies the Malt alive both
before

before and after grinding, even into the Mash-tun, the Drinkers in course must swallow the Quintessence of their nasty Bodies; which before, on sight of only one being crushed under the Nail, would be apt to turn his Stomach. And therefore it highly concerns all to be assured their Beers and Ales are brewed from sound Malt, clear of that stinking Insect, the Weevil: They likewise infest Ships, and are frequently found in their Bread, which these Insects feed on as long as they can, and then die in it, and afterwards poor Tarr is often forced to take up with it; hard Fate, when it won't afford even a Weevil any longer Subsistence.



C H A P. XVII.

Common Purl improved by a famous new cheap Receipt now in use, rendring it far more wholesome and pleasant than by the common Way. Or an eminent Victuallers Method of making Purl.

ROMAN Wormwood two Dozen; Gentian-root six Pounds; Calamus Aromaticus (or the sweet Flag-root) two Pounds; Snake-root one Pound; Horserhadish one Bunch; Orange-peel dried, and Juniper-berries, each, two Pounds; Seeds or Kernels of Sevil-Oranges clean'd and dry'd, two Pounds. These he cuts and bruises and puts them into a clean Butt, and starts his mild brown, or pale Beer upon them so as to fill up the Vessel, about the beginning of *November*, which he lets stand till the next Season. This he does annually, and ought to be followed by all of the Business.

N. B. Was he to add a Pound or two of Galingal-Roots, to it, the Composition would be the better. This
Victualler

Victualler is of Opinion that there is scarce six in Twenty of his Fraternity in Town, who do not make their Purl only with their Refuse or Waste-Drink, such as they receive in their Tap-tubs, by throwing into it no other Bitter, but a Parcel of common weedy Wormwood ; which Compound, one would think, more fit for a Puke, than a grateful, cordial, stomachic Bitter.

A Cure for the Gout or Rheumatism.

When I was at the City of *Wells*, the Town of *Bridgewater* and some other Parts of *Somersetshire*, in 1737, I could not but lament the deplorable Condition of several Publicans whom I saw there miserably afflicted with the *Gout*, which I think was chiefly owing to their stale, Butt, pale Beer, that here is their common strong Drink. To one Inn-keeper, who a long time was forced to walk with two Sticks, and another Bed-ridden, I gave the following Medicine that restored them, viz. Take one Ounce of clean Gum Guaiacum finely powdered, and put it into a Quart-bottle of right *Jamaica* Rum. Of this take half a Quarter of a Pint or less as you go to Bed, and it will cause a small Sweat, and perhaps a Stool or two. If it does not carry off the Pain in one Night, repeat it once or twice more. It is a very safe Remedy, curing both *Gout* and *Rheumatism* ; and is now in great Reputation and Use among the Nobility in general ; from one of whom I had this famous Receipt ; which frequent Experience also warrants to be a most excellent one for any Degree of the Scurvy, and is accordingly now daily taken by many after the following manner. viz.— Infuse two Ounces of the Powder in one Pint of old Rum ; of this Liquor, put one or two Tea Spoon-fulls into a Glass of cold Water, and drink it at Night, or better in a Morning fasting.

Observations on some Country Drinks.

In *Suffolk* and *Norfolk* they run very much upon a light brown or deep Amber colour'd Butt-beer, which

in the latter Place is called Nogg, is commonly sold for Six-pence *per* Quart, and in some Parts is a light, good Drink : But then, like their Cheese where they make most-ly Butter, their common Ale is hardly fit to Drink, as being generally made from the earthy Goods of the strong Beer and its Hops. About *Rochester* in *Kent*, they brew a most potent, deep, brown, stout Beer, at four Pence *per* Quart, and which indeed best agrees with their brackish Water and bad Air. In *Somersetshire*, and some other Parts of the *West*, they affect a pale Butt-beer; and at *Bristol*, besides their stale Drink, a mild, cool-work'd common Ale is much in Request for being of a deep Amber or light brown Colour, and so clear that they often bring it in Decanters; A Condition ! That I could wish to see the hot-work'd *London* common brown Ale always in, that both it, and the pale Yeast-beaten Ales &c. may be free of that *Odium*, which Strangers are (but too justly) very apt to cast on them. At *Bedminster*, an eminent Quaker, who had got so much by the Distillery as to live on his Estate, told me he had rather brew in a Kettle, than drink the Town-brew'd Malt Liquors ; a Reflection which I think cannot take place, if the excellent New-River Water, sound Malt, an Airy Brew-house, and a true Art were employed in the brewing of them : In order to which I have endeavour'd, in my First and Second, as well as in this Third and last Part of the *London and Country Brewer* to bring about ; and that this may be of the greater Service I have here added the following many valuable Receipts for fining, preserving, and improving Beers and Ales in the Cellar, which, if duly and rightly observed, will in great measure spoil a Sort of business lately set up in the Metropolis, by some called *Vinegar Coopers*, who buy great Quantities of damag'd stale Butt-beers for that purpose.



C H A P. XVIII.

T H E

C E L L A R - M A N.



OF U L Experience shows the Want of this Art in those who are ignorant in a Cellar of Malt-Liquors, by the great Numbers of Vessels of Drink which are annually damaged or spoiled on this very Account. For this Reason, some think that a well qualified Person who has under his Care great Quantities of Beers and Ales is no less useful than a skilful Brewer; for though the latter is the prior Workman in preparing and finishing Liquors for the Cellar in a short time, yet is the former engaged sometimes Years together to preserve and keep in due order his several Sorts, that their Owner may not sustain any damage by Leakage, ill fented Casks, Staleness, Ropyness, Foulness, or any other Incident; but that through the Skill and good Management of this Person such Liquors be improved even beyond that natural Order the Brewer left them in. On this Account also may Victuallers, as well as private Persons, become Curers of their own Drinks, which by these Means they may improve after their own Taste, without being confin'd to the Caprice of a Cooper, or the Niggardliness of his Master: For I know some Brewers that are seldom at a greater Expence than Elder-berries and Isinglass for their brown Drinks, and but little otherwise for their Pale; which brings to my Memory, the Expression of a Person who invited his Friend to a good Pot of Drink; says he, if you'll go to a House I know off, we shall be sure to have

right, for this Man never admits a Cooper into his Cellar.— Also at *Reading* in *Berkshire*, I knew an Inn-keeper there, who is such an Artist as to supply the starting Cooper's Place, and doctors his Beers and Ales so well, that the worthy, eminent Brewer he takes them of, declared when he tasted them, he could hardly believe they were the Drinks he sold him, on account of their being so much improved beyond those in his own Store-house. So at *Newberry*, where is kept about two Thousand Barrels at a time of pale or light Amber Beers in Cellars and Store-houses belonging only to one Brew-house, they are so skilful and careful as to improve and preserve them in a right Condition till their Vent at *London*, &c. lessens their Number.

Of *Foxing*, *Bucking*, or *Charning Malt-Liquors*, Three *Synonymous* Terms for what in *London* they call only by the Name of *Foxing*; but in some Parts of the *West*, by the other two. In my Second Book I thought I had fully laid open this great Evil, however I find myself obliged to enlarge on the same in this place, and say, that besides the wooden, upright Pins, which fasten down the Planks to the Joists of the cooling Backs, and working Tuns, there lies between them Tow or Wadding drove in mighty close, and is what some call *Corking*, to keep the Water, Worts, and new Beers and Ales from leaking through the Joints, which being of a spongy, hollow Nature, especially in hot, dry Seasons, readily imbibes and very tenaciously retains any nasty Acidity that can make a Lodgment in it, and which fails not sometimes to infect the succeeding Worts, before the Yeast is put into them, and sometimes in the working Tun there will appear a whitish Cream on the Top, and then the Drink receives the Damage before the Yeast can get dominion of the Wort. When it so happens there is no longer doubt but that such unnatural, poisonous Fermentation has brought the Fox into your new Wort, Beer or Ale, and then cure it if you can. However as difficult as it appears, by having rendred abortive several Attempts that have been made to this Purpose,

pose, I shall endeavour to write such Receipts, as I hope will contribute to its great Service, if not a Cure, and make such damag'd Drinks wholesome and pleasant.

First Receipt.— Take a large Handful of Hyssop out of a Garden, and cut it small; with this mix a small Handful of Salt, and put all into a Hogshead of ropy Drink, and in two Weeks, it will be clear, if you stir the Vessel well when its put in, and let the Ingredients remain to the last, stopping all close directly.

Second Receipt.— I knew a Person catch'd in his Brewing with this Disease, by means of a Tub that the Servant had used in washing, and put by without scouring or scalding; for all Soap naturally leaves a white Furr behind it on the Sides of the Tub, which by drying on encreases its Acidity, and turns the Wort into what we call a fox'd, ropy Condition, in some measure as Rennet does Milk. Now as Hops are of an active, rigid Nature, they are certainly an Enemy to the ramous Quality of the corrupted Drink, by piercing and cutting through its cohering Parts. For which, take a Parcel of fresh, strong Hops (according to the Quantity and Property of the Drink in the Vessel, and put them into an earthen, glazed Pot, with a little Salt of Tartar; then pour on them boiling Water enough for the Hops to infuse in like Tea, covering the Pot very close to keep all Steam in. When cold strain the Liquor off, pour it into your Vessel, and stop it close directly.

Third Receipt.— Take an Ounce of beaten Allum, with two of Mustard-seed bruised, and an Ounce of ras'd Ginger, likewise well bruised; put all into half a Hogshead of fox'd, ropy Drink, and it will easier cure this Misfortune in the Barrel than in the Tun; because in the latter, the Efficacy of the Remedy will work off with the Yeast to a great degree. This Composition will break the ropy Parts of the Drink and fine it well.

Fourth Receipt.— I knew a great common Brewer experienc'd a Secret that absolutely cured his fox'd Drink, which was in the following Manner, viz. At every
Brewing

Brewing after he had strained the Sweepings of his Coolers through a Flannel-bagg, (as they all do,) he run through the same Part of his damaged strong Drink, and put it into a Barrel by itself, and so on, some every Brewing till all was so done, and it proved an entire Cure.

Fifth Receipt.— Take Ash, or rather Beechen Billets, and let their Ashes run through a Wire-sieve fiery hot into the Drink while in the Tun.

Sixth Receipt.— Some slack Stone-lime, and sift it into such Drink; but the Bay-salt is beyond them all to prevent and cure this Disease, by using it as I have, in *Page 25.* of my *Second Book*, made known. For Salt of any kind is an active Substance, said to give all Bodies their Consistence, and preserve them from Corruption. It occasions the many Variety of Tastes that are, and will not suffer any Insect to live in it, but like a Wall keeps the Body safe. it is mix'd with against the Putrification of hot Airs, Liquids, Earths, or any opposite Contingent. If you put foxed Drink into a Barrel, and let it remain some time, the Vessel won't be tainted by it, but will be sweet and good on only washing it, first with cold, and then with scalding Water! The Reason is, the Joints of the Staves are so close by the Force of the Hoops, that the Liquor has not Room to penetrate as in the square Tuns, and Coolers. But above all 'tis the diligent, cleanly Brewer that escapes this Damage, when the indolent Sloven is in for it. Of the first Sort, some are so curious, as I have said, not to suffer a Pail to be dipt in cold Water, but to be scalded before it is used again. Others will allow a good Distance of time before they brew again, that the Utensils may be thoroughly clean'd and dried; for all season'd Tuns, Tubs, and Casks are capable even of themselves to excite and bring new Worts into a Fermentation in time. So likewise Worts that are laid too deep in Coolers in warm Weather will ferment of themselves, in no great distance of time, without the help of Yeast: The same in Winter though more slow; For this reason some are so justly nice as to lay them
but

but two or three Inches thick, while others will venture them six or eight, to make haste for the next Piece of Wort to succeed, and then often the Fox is bred. It's true, that it is best working Beers and Ales in season'd Tuns and Tubs, because the Powers of the former fermented Liquor that remain'd in the Wood will communicate its Quality to the next Wort, and impregnate it with its fermenting Parts, and so forward the Operations much sooner than any new Back, Tun, or Tub, that will rather drink up its Spirits, work it more slow, and leave the Drink vapid and weak.

A Kilderkin of fox'd Drink cured.— A Fortnight after it had been in the Vessel, it was rack'd off into another, and then two Pounds of *Malaga* Raisins were cut in bits and hung in a Bag by a String, that at a Month's End were taken out, least after they had emitted their Sweetness an Acidity should ensue; besides which, a Mixture of Treacle, Bean-flower, Mustard-seed bruised, and Allum powder'd, were added; which not only cured the fox Part, but also a burnt Tang that the Malt gave the Liquor.

A new Method of Seasoning new Casks.— Put the Staves, just cut and shaped, before they are work'd into Vessels, loose in a Copper of cold Water, and let them heat gradually so that they must be well boiled, and in boiling take out a Hand-bowl of Water at a time, putting in fresh till all the Redness is out of the Liquor, and it become clear from a Scum of Filth that will arise from the Sap so boiled out: Also take care to turn the Staves upside down, that all their Parts may equally have the Benefit of the hot Water. Observe also that in a dry, sultry Summer the Sap is more strongly retained in the Wood, than in a cool and moist one, and therefore must have the more boiling. Then when the Vessel is made, scald it twice with Water and Salt boiled together, and you may boldly fill it with strong Beer without fearing any Tang from the Wood.

Keeping empty Vessels sweet.— I knew a Person that brews his Drink for publick Sale, so curious in this

this Affair, that though he has red Clay before his Door in plenty, yet will never use it for stopping or bunging his Vessels, saying it will make the Bung-hole stink in a little time, even though it is mixed with Bay-salt; and therefore makes use of the wooden Burg I have described in my First Book, which as soon as he has put into the Vessel with some brown Paper, he directly mixes some Wood-ashes with Water and puts it all about the same, with as much care as if the Cask had been full of strong Drink, though it is done only to keep the Grounds sweet while they are so. And thus a Vessel may be preserved in sound Order near half a Year; for it is the Air that makes them stink; but if the Grounds are stale or sour before this is done, then it won't answer.

To Sweeten very stinking or musty Casks.— In my Second Book, Page Twenty-four, I have shewed the best Way of all others to cure foxed or tainted Coolers, Tuns, or Tubs, and here I shall do it for the Cask, and that by several Ways. First I make a strong Lee or Lye of Ash, Beech, or other hard Wood-ashes, and pour it boiling-hot into the Bung-hole, and repeat the same if there is Occasion. This is a most searching Thing that will penetrate into the Pores and minutest Crevices, and overcome this horrid Misfortune. The second is done by Malt-dust boiled in Water, and immediately poured off into the stinking or musty Cask, where it must be well bung'd for some time.— The third and best of all is, what I have thoroughly experienc'd to answer the full End of sweetning a stinking or musty Cask, even beyond the Cooper's firing; and that is to fill your Vessel with boiling Water, near, but not quite to the Brim, and then directly put in Pieces of unslack'd Stone-lime, which will presently set the Water a boiling, that must still be fed on with more Pieces till the Ebullition has continued half an Hour at least, but if very bad, longer: And after you have so done, bung all down, and let it remain till it is almost cold and no longer, lest the Lime at bottom harden too much, and it be difficult to wash out. In this Manner you may make the
Water

Water boil in the Cask as in a Copper, and by the subtile Salts of the Lime, it will make its way into the Pores and Chinks of the Wood, so as to extirpate all ill Sent and Taste, provided the Taint has not quite got through the whole Wood.— A fourth Way is to mix Bay-salt with boiling Water, and pour it into the stinking or musty Cask, which must be bung'd down directly, and let remain some time to soak.— A fifth Way is to take the Head out of the Cask, and burn some Pitch on a Chafing-dish of Coals, clapping the loose Head on again while the Fire burns: When this is done, burn some Frankincense in the same manner to sweeten the Vessel, though Pitch of it self is not bad.

To preserve Brewing Tubs clean and sweet.— A Nottingham Woman-Brewer is always so careful to keep her cooling Tubs sweet and clean, that she never fails, as soon as she has done brewing, to rub the Inside of them with a Brush and scalding Water; then sets them by, and never fears the Fox. But if there is any Yeast or Furr left on their Sides, its a chance if the next Wort does not ferment into a creamy Head, and Fox.

To Fine, Relish, and Preserve a Butt of strong Beer. Take a Gallon of Wheat-flower, six Pounds of Molosses, four Pounds of Malaga Raisins, one Handful of Salt; make it into Dumplings, and put them into the Bung-hole in the Head as soon as you have rack'd the Drink into another Butt.

To Recover a Butt of flat brown Beer, and to Fine and Mellow stale, prick'd, and foul Drinks.— Take a Handful of Salt, and as much Chalk scraped down fine and well dryed on a Plate before the Fire; then take Ising-glass and dissolve it in stale Beer till it is about the Consistence of a Syrrup; which strain, and add a Quart of it to the Salt and Chalk, and also to two Quarts of Molosses mix'd first all together with a Gallon of the Drink, and put it into the Butt. Then with a Staff slit into four at the lower end, stir the rack'd Beer well about till it ferments, on which immediately stop up

L

very

very close, and in Eight and Forty Hours you may draw it.

To Fine, Preserve, and Relish a Hogshead of pale Drink. Take one Quart of Oyster-shells dried twice or thrice in an Oven, and then beaten to Powder; the pure, white Side is much the best; mix a Quart of it with one Ounce of beaten Grains of Paradise, and some Lemon-peel sliced or shred small, put all into a Hogshead.

Another for the same Purpose.— Take Alabaſter, burn it, and beat it to a Powder, when cold mix it with about an Ounce of burnt Allum, and a Quarter of a Pint of dulcified Spirit of Wine; put all into a Kilderkin of strong Drink just before it is bung'd down.

To preserve pale Malt-Liquors.— Take calcin'd Oyster-shells and Crab's Claws beaten well, and boil in a Gallon of the same Drink, which when cold put into the Vessel.

To Fine and Keep Malt-Drinks.— It has been many Years a Custom with some to do this by boiling, either Ivory, or Hartshorn Shavings in the Wort; about one Pound to a Hogshead I think will do. Most of it will dissolve in the Liquor, for after it is well boiled, there will be but little perceived. This not only fines the Drink by its glutinous Dissolution, which by its Gravity drives down the lighter Fæces, but it also preserves it sound and healthy by reason of its alcalious Nature. However you must take care not to use it in too great a Quantity, because then it will certainly give the Beer or Ale an urinous Taste, and also make it rope.

To stop the Fretting of Drink.— Boil three or four Ounces of fresh Hops in a Bag a few Minutes, then dry them in the Sun, or otherwise, put them into the Cask in which the Drink frets and it will cure it.

To Fine, keep Sound, and add a Flavour to pale Drinks. Take white Pebble-stones and bake in an Oven till they crack, then beat them to a Powder, therewith mix a good Parcel of Syrop of white Elderberries, which are now pretty common (or Honey, but this is apt to turn Acid) or Treacle: To this add Lemon-peel, and

and a few Sprigs of Clary if you think fit, while it is in Seed. Put these into a Butt of pale strong Beer or Ale as soon as it is rack'd off, and stir all together well with a Paddle.

To Fine and keep pale Drink from Fretting.— Take a Pound of Rice, dry it and beat it very small with a Penny-worth of powdered Allum, and a Handful of powdered fat Chalk; for Chalk is a great Absorbent, and with other Ingredients carries down the Fæces, and keeps them from damaging the strong Drink. But in time the Salt and sulphur of such Fæces will tincture the whole Mass to its prejudice; therefore when the Drink is fine, rack it off, and feed it with Rice, Allum, and Chalk as abovesaid.

To Renew and Fine the Bottoms of Casks, or any flat Drink.— Take one Pound and a half of Sugar, and boil it in Water, when cold add a little Yeast, when fermented put it into a Firkin of such Liquor, and it will set the Whole a working, and make it drink brisk and pleasant.

To recover ropy, flat, or prick'd Drink without putting any Ingredients into the Vessel.— They roll and tumble the Barrel backwards and forwards up and down on a Stilling, till they thoroughly break the caked hard Fæces, and thus bring the Liquor under a fresh Fermentation, so strong as almost to endanger the Head or Hoops flying off, if kept stoppt. Then after it has stood a while and settled, they peg and try it. If once serving it thus does not answer, it must be repeated till it does. Once performing this Operation recovered a large Cellar full of strong Beer in *Norwich*, which, though it was roped after an extraordinary Manner, and not saleable (but well tasted,) yet by this Management they were courted for it, even by another Brewer who bought most of it.

To Fine any Sort of Drink.— Take the best staple Ising-glass, cut it small with Scizzars and boil one Ounce in three Quarts of Beer; let it lie all Night to cool; thus dissolved, put it into your Hogshead next Morning

perfectly cold ; for if it is but as warm as new Milk, it will jelly all the Drink. The Beer or Ale in a Week after should be tapt, else it's apt to flat, for this Ingredient flats as well as fines, and therefore is now more in Disuse than formerly; but remember to stir it thoroughly well with a wooden Paddle, when the Ising-glass is put into the Cask.

A second Way.— Put two or three Handfulls of small red Gravel, or, better, scouring Sand into a Barrel, stir it well about and it will answer.

A third Way.— Boil a Pint of Wheat in two Quarts of Water, then squeeze out the liquid Part through a fine Linnen Cloth. Put a Pint of it into a Kilderkin, it not only fines but preserves.

To Fine pale Drinks, A fourth Way.— Get a Powder from the Sculptors or Image-makers, and mix it with a Dissolution of Ising-glass. This Dissolution is made after the Proportion of one Pound of Ising-glass dissolved in three Gallons of stale Beer, by stirring it well now and then with a Whisk in the cold Drink; and, which is an Allowance for fineing three Butts, with a sufficient Quantity of the Powder.

A fifth Way.— Some Brewers put, for fineing and heightning the Colour of brown Beer, five or six Quarts of pick'd Elder-berries into a Pail of Ising-glass Beer. In time they'l dissolve in the Beer, or you may squeeze and strain them through a Sieve, and then it is fit for Use.

To Fine and Feed Drink, A sixth Way.— Take the Whites of three Eggs and their Shells, and mix with Flower of Horse-beans made fine, (that have been split and dried on the Kiln,) but none of the Husk, and some clean Brandy, make it all up with some Treacle, and put it into a Kilderkin.

A seventh Way.— They'l take Hops that have been boiled Twenty or Thirty Minutes in a first Wort, and dry them again; then put half a Pound into a Kilderkin, and it will fine it very well; and are better than fresh unboil'd Hops; because these will gather, some
into

into a Head and some settle, and so are apt to foul the Drink in Draught. Others have used green Hops off the Vine, when they have been near ripe, and put into a Vessel, that answered very well.

An eighth Way.— It is the Practice of a certain Man, whenever he happens to have any Drink too stale, to put some scalding Water on Hops under Cover; where after having infused some time, he puts all into the Bung-hole to fine, recover, and preserve the same.

To keep small Beer without Hops.— Another uses no Hops in making his small Beer, all the Winter especially, but instead thereof, mixes a Penny-worth of Treacle with a Handful of Wheat and Bean-flower, to which he adds a Penny-worth of beaten Ginger, and kneads it into a due Consistence, which he puts into a Hogs-head and bungs up.

The Method of a private Family to improve their Drink. They never tun without putting a little Salt and powder'd Ginger mix'd together into it.

Musty Drink, Is occasion'd by musty Vessels, it is cured by running it through the Grains.

To preserve Drink that is to be sent abroad.— Draw off the Ale, or Beer into a clean Cask; then pound some slit, dryed Horse-beans, free of their Hulls, till they are well powder'd, or made so by grinding them in a Mill: With this mix a little Yeast and knead it; then dry it by a Fire; but not in an Oven, because it may be too hot for this Use. The Quantity of a small Dumplin will serve a Hoghead.

To recover prick'd stale Drinks.— For this see my Second Book of the *London and Country Brewer*, Page 30.

To help decayed Drink.— Some will put the Ashes of Beech into a Bag which they'l let hang in the Liquor by a String, and bung close; some put Horse-beans into the Drink to preserve it mellow, but too many will give it a disagreeable bitter Tang.

To recover thick, mummy Drink that is Acid.— Make a strong Hop-tea with boiling Water and Salt of Tartar,
and

and it will do by adding it to the Rest ; or rack a Vessel of mummy Beer into two Casks, and fill them up with new Beer brewed not so strong and it is a Cure.

Vamping Malt-Liquors.— Is of late much in practice for its excellent Service in recovering, preserving, and fineing strong *October* and *March* Beers in particular ; because by a new Fermentation the whole Body of the old Drink is renewed and brought under a fresh Nature ; and thus a Butt of such Liquor need never suffer damage or be spoiled by Staleness or Age, since you may alter the Case at pleasure. The Way to do it is thus : Divide your Butt into two by racking it off, then fill both up with new Drink of the same Sort, and in three Weeks or a Month you may draw it off fine.

The new Way of Managing strong Drinks from the Tunning to the Drawing.— To do this there is more than one way used. One Person I know never stops the Cork-hole of the upright Butt, but lets it alone a Month, two, or three, till he perceives the Drink well settled, and then racks it off into another Butt, with two Pounds of new Hops, which he immediately stops up at both Bung and Cork-hole.

Another leaves his Cork-hole open only a Month, and then stops it up ; then about a Month before he draws for good, he takes out a little of the same Beer, and puts it on two Pounds of rubbed new Hops, which he pours into the Cask, and stops all close and secure.

Another lets his large Cask of three Hogsheads stand, with an open Vent, six Months, only with a Piece of brown Paper pasted before the Cork-hole ; and then he puts in two Pound of Hops that had been boiled but twenty Minutes in a first Wort, and dried, and one good Handful of Salt ; then directly stops all up very close, and in about a Month's time it will be fit to draw fine and be brisk to the last. But others are so nice in this Point, that instead of keeping these boiled Hops dried by them, they so contrive to brew, that they may have them directly, to put into the Cask of Beer which they want to fine down, just as they are done

done with; and say, that for this purpose an used Hop boiled but a little While, is better than an entire dry one, because the former will sink and drive down the Fæces presently, when the fresh ones are apt to remain on the Top. On these Accounts People differ, some will fine without Racking, others will rack before they fine; some will use Salt, others none but Hops. But when they intend to tap their Butt-Beer at four Months old, they always use Salt with the Hops: For Salt stales Malt-Liquors in four Months, as much as twelve Months Age will do without it. And as for the leaving open the Cork-hole Vent, I am of opinion, that Malt-Liquors digest and maturate in the Cask in some measure as Food does in the Stomack, and thus become more fitted for the animal Secretions by a due Age, which must be more or less according to the Strength of them. Therefore it's the Practice of some not to stop up the Cork-hole for six Months together, on purpose to expose the Drink all that time to the free Admission of the Air, which will rush in, and, by its Elasticity and Pressure, throw down the gross Particles, keep it from fretting, and thereby fine and ripen it the sooner.

Racking off Malt-Liquors.— Dregs (in my Opinion) consist of the earthy and farinaceous Parts, mix'd with the acrid Salts of the Compound the Liquor is made up of, and intrinsically contain no Spirit but what they absorb from it; which Salts not being fixed are capable by sundry Causes to be incited into Motion, and so cause extra Fermentations, which, when frequent, so exhaust the Spirit of the Drink as to get the Ascendant, and render it vapid, sour and ill tasted. But I remember the Assertion of a certain Person to be otherwise, who said that the Lee of any Liquor is the strongest Part of it, but most and soonest subject to spoil and corrupt, and so long as that holds good the Liquor feeds on it, but after such a critical Time it will spoil the Drink, and this he says is the Cause for Racking; but how reasonable this is I leave others to determine. Some are so curious in the Observation of this, that they won't

won't draw off their Drink into another Cask, before it has passed a second Fermentation in the first Butt, and this happens sooner or later, as the Quantity of Fæces, the Temper of the Air, and the Place it stands in is; the Crown of Yeast that lies just below the Cork-hole (while it remains on) securing it from taking damage several Months together: And when they don't rack it, such Beer is accounted in best Order when it is drawn after the middle Hole is stopt up, because it has the greater Feed from the remaining Fæces. Observe also that, the Cask you intend to receive your rack'd off Liquor in, should always be first season'd by the Steam of a Brim-stone Rag, which will effectually stop it's Fermentation and fine it. I must likewise hint that its too common a Way with some to drive the Brass-Cock with a Hammer or Mallet into the middle Hole of the Butt, and then very likely the Crown of Yeast falls down, and the Drink grows vapid, flat, and thick; so also are those liable to the same Inconveniences who thus inconsiderately peg a Cask.

A general Mixture for preserving, fineing and relishing Malt-Liquors.— Take one Penny-worth of Treacle, Powder of fat dried Chalk, Bean-flower, Wheat-flower, Oyster-shell-powder, Pebble-stone-powder, of each a Hand-ful; one Quartern of *French* Brandy, and two Ounces of powder'd Ginger; knead all together into four or five Dumplins and put all into a Butt of rack'd; strong brown Beer; And to relish it, you may hang a Penny-worth of Orrice-root, and six Pounds of chopt Raisins in a Bag fastened by the Bung: But these two last should be taken out at a Month's End. If for a Butt of pale Beer, instead of the Treacle, you may use a Syrop made with White Sugar.

To Correct any predominant Acidity in Malt-Liquors. The best thing is to buy of the Druggist, Mr. *Walmsley* on *Snow-hill*, or others, some of the Oyster-shells which have been collected from the Sea Shore, and there, by the Sun, Calcined to a Whiteness. Break these in a Mortar into Peices of the Bigness of Six-pence or a Shilling,

Shilling, and put them into the Liquor, for if you powder them, the least Motion will be apt to make them rise and foul the Liquor, which by this means is prevented and the Work done full as well. Chalk and other *Testacea* will answer the same, but not so well because they all more or less will give the Drink a disagreeable Taste.

Cloudy Beer accounted for, and its Cure.— This is a Misfortune attending both pale and brown strong Malt-Liquors, more of late Years, than in time past, and that in many Places in *England*; but most of all in *London*, where it causes frequent Returns from the Customer to the great Prejudice of the Brewer, and is occasion'd by the Hop and Malt. First by the Hop, which contributes to it by emitting its oily Body in long boiling to the Wort, and the longer the Ebullition is continued, the more you draw out its heavy oleaginous Body, that consequently fouls the Drink, and hinders its fineing; for though it may deposite its grosser Part, yet will this oily one always be in Motion, not only to retard the Fæces from subsiding by enveloping them in its tenacious Body, but is afterwards also endeavouring to gain the Ascent (as the Nature of Oyl is;) but this it cannot thoroughly do, because of its intimate Union with that of the Malt in the Percussions that the igneous Particles produce in boiling. This I take also to be the Reason, why Grains of Paradise have puzzled some Brewers to account for their constantly fouling the Malt-Liquor they are boiled in, (to encrease its Strength,) and that such Drink always remains so notwithstanding their most accurate Attempts to the contrary. So that if these are to be used, the only Way will be only to infuse them as well as the Hop as I have before observed.

N. B. The aforesaid oily Matter not being rightly managed and digested I take to be the Cause of, and Cause of cloudy Beer, and therefore resists and will not incorporate with the forcing of Ising-glass.

Secondly, when this Evil proceeds from pale Malt, it is occasion'd by its being too slack dried, or rather

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by its being cruſted Without-side by the Violence of the Fire, when the Inside is full ſlack or almoſt raw; and as thus the Malt-Kernel is in two ſeveral Conditions, ſo is the Liquor made from the ſame in two different Orders, as is plain from the View of ſuch cloudy Beer in a Glaſs, known by holding it up, and then it will appear bright and clear, but hold it down, and it will ſeem fouler and of a grey, wheyiſh Colour. So the brown Malt, that of late Years, ſince the Invention of the Plate-kilns in particular, the Kernels are made to crack, bounce and fly up by the Vehemency of the Heat, whereby they dry two or three Kilns in the time they uſed to do one, which makes ſome Part of the Malt parch'd or burnt, and the other Part raw or under dried, and which very probably may be the Cauſe of cloudy Drink, that by many is thought incurable.

To Cure cloudy Beer.— Rack off your Butt; then boil two Pounds of new Hops in a ſufficient Quantity of Water with a due Proportion of coarſe Sugar, and put all together into the Cask when cold; and it is far better than a Pap made with Rye-flower and Malt-ſpirits as ſome are for. Others have attempted this Cure by only ſoaking new Hops in Beer, which when ſqueezed, they put into the Cask of cloudy Beer.

Another Way to cure a Butt of cloudy Beer.— Take twenty Pounds Weight of baked Pebble-ſtone Powder beaten very fine, with the Whites of twelve Eggs, and Bay-ſalt powder'd to the Quantity of a Handful; beat and mix theſe very well with two Gallons of the Beer and pour all into the Butt of Drink ſtirring it ſoundly; and after three or four Days at moſt it will be fine, then draw it off its Lee; Thus you'll have a clean, fine, well reliſhed Drink free of that flying diſagreeable Lee that before poſſeſs'd the whole Body of the Liquor, and which otherways would have remained in the ſame to the laſt.— I have ſeveral more uſeful Curioſities in the Art of Brewing to communicate when I have tryed ſome, and got the compleat Knowledge of others.

Cautions

Cautions relating to Malt-Liquors.

First, *Of the Sediments or Fæces of Malt-Liquors.*— As these abound with the acrid Salts of the Malt, whenever the Drink is in too stale a Condition, it should be racked off before any of the aforesaid preserving, fineing Ingredients are put into the Cask : Because in this Case, its a Chance if such corrupted Fæces do not get the Ascendant of the designed Antidote, and help to corrupt that as it has before done the Beer. For not only the Fæces, but the whole Body of the Drink will consequently oppose the Remedy, and if they be Major, the Attempt will prove abortive.

Secondly, Salt and Allum must be used with great Precaution, because they potently induce Staleness in Malt-Liquors in a little time, if mixed in too great a Quantity with other Ingredients that are to be put into the Cask, and so are apt to overcome their alcalious Parts. Therefore some will use no common Salt this way, but throw a Handful or two of it into the Mash-tub among the Malt, to preserve the Liquor sound while it lies with the Grains ; and thus the Salt is thought to loose Part of its sharp Nature by its being strained through the oily Part of the broken Kernels ; but even this has its Inconveniency as it is apt to retard Fermentation.

Thirdly, *of Stone Powder.*— This by some of the Brew-house Coopers is made use of for fineing down their Butt-beers, and is very good when it's a little burnt, because then it becomes a Sort of Lime, and its fixed Salts are thereby made to yield their Virtue to the Drink. But when the Powder of a soft Stone unburnt is used, (as too commonly is done with a Mixture of Ising-glass,) then it gives the Liquor an earthy, raw, unpleasant Taste and unwholesome Quality, which will spoil other good Ingredients it is incorporated with ; as I knew once done by a Person who had made a Compound of several in good Order, that were all damaged by this, to the great Prejudice of the Beer.

Fourthly, *Whites of Eggs*. These certainly will clear, feed, and preserve Drink, if mixed with Wheat-flower, &c. but then it ought to be considered that the Whites are apt to corrupt in time and do damage, where the Drink is not very strong and able to preserve them sound; besides if in this Case too many of them are used, they may bring the Beer into a ropy Condition, or give it too raw a Taste: Some therefore when these are to be used will boil them up in Water and Sugar to a fine Syrop, and then such Syrop of Sugar will be advantageous in preserving as well as clearing the Drink when mix'd with other Ingredients.

Fifthly, *Egg-shells, and Crabs Claws*.— These like all the other *Testacea* are of an alcalious Nature, but more especially so when the crude Part of them is taken away. Therefore to cure these and make them fit to be put into the Cask of Drink, bake them a little, and then you may either mix them with other Ingredients, or use them alone, by way of preserving Beers or Ales against Staleness.

Lastly, *Oyster-shells*.— These are likewise a great Alkaly or Absorbent, and are of particular Service in the Management of Malt-Liquors, especially if us'd in the manner aforesaid; but should by no means be us'd crude or unprepar'd: Therefore as many are not capable of purchasing them from the Druggists, let such first wash and wipe them dry, then bake them two or three times in an Oven after Bread is drawn, beat off their brown Part and break the White into small Pieces for Use.

Bottling MALT-LIQUORS. This is certainly a great Improvement if perform'd in a right time and manner, because Drink thus confin'd is more free from Air, Heat, and Fæces, than in a Barrel, which often exposes its Spirits to Loss by Vent and frequent Drawings out. But the greatest Improvement of all, is when Drink becomes flat and deaden'd by the Casks absorbing its Spirits, or that the Sediments have attracted them, &c. In all which Cases Bottling often recovers the Liquor and re-establishes

establiſhes it in a greater Fineneſs, Purity, and Briskneſs than ever, and eſpecially if an additional proper Food be allowed it that will give it a long Duration in a ſafe mellow and cool Condition, and the ſurer if kept from heat and cork'd well. In this Oeconomy particular Regard ought to be had to the Age of the Liquor, that it be full ripe and not too young when it is bottled; if it is, very likely it will throw out the Cork or burſt the Bottles; which to prevent, cork looſe at firſt, and afterwards firm; and if after this a Ferment is perceived, looſen again. Stone Bottles are not ſo good as Glaſs, becauſe of their rough inſide, that is ſooner apt to furr, taint and leak, their Mouths uneven to Cork, and their Sides not to be ſeen through. Some are ſo curious as to uſe the Glaſs Stopples inſtead of the Cork, which if rightly fitted, admits of no penetration, as is well known to the Chymiſt, who by this means retains the Spirits of his fiery Liquors in the beſt manner. You may for a Day or two after bottling keep the Bottles in cold Water or in a cold Place, or have ſome cold Water now and then throw'd over them, to prevent any Ferment coming on, leaſt the Air, by being thus cloſely confin'd, ſhould break the Bottles, when a Cork in the room of a Glaſs Stopples would ſave them as being of a porous Nature. Glaſs Bottles are ſweetned and clean'd either by hot or cold Water, if ſtinking put them in a Kettle of cold and boil them, but don't put them down while hot on a cold Place, leaſt they crack: then lay them on dry Boards, Straw, or Cloth; if dirty, waſh with hard Sand, ſmall Stones, or better with Shot. Some ſteep Corks in ſcalding Water to make them more pliable to the Mouths of the Bottles and to fill up their Pores, and for a further Security faſten them in with ſmall iron Wire twiſted about, after the *Herefordſhire* Faſhion, that they praſtiſe in bottling their fine Styre Cyder. Weak Drink ſooner breaks Bottles than Strong, becauſe the Liquor has not Strength enough to detain the Spirits. To preſerve Drink in Bottles lay them ſide ways, it keeps the Cork moiſt, the Air out, and confines it to the Side, where
it

it can't escape, a Way much better than putting the Mouth downwards in a Frame; for then if there be any Fæces they will come out at first. Putting Bottles in Sand in some measure keeps them from the Power of the Air, but this is not quite so good as if they were kept in Water, which prevents Fretting or Fermentation, and adds a Strength to the Drink by its intense Coldness, which likewise checks the Activity of its Spirits, and by its close Body keeps out Air, especially if it is Spring-Water. For this Purpose, in many Cellars there may be Tanks or Cisterns made to hold Water either with Stone or Brick by the help of Plaister of *Paris*, or with a cementing Composition made with Oyl, new slack'd Lime and a little Cotton-wool, that will harden the more, the longer the Water lies in them: Or lay such Stone or Brick in a Bed of Clay beaten and trod very fine before, so that it may be a Foot thick at least on all the Sides and Bottom, as the Brewers order their Tuns; and to empty them at pleasure a Hand-pump of a small Size may be made use of; or in Cellars there may be large Holes made in the Side-Walls that will contain a Number of Bottles, as is commonly done in the Country, and the nearer these are to the Ground the better the Liquor will keep. But if this Way is too troublesome, little Vaults may be built in the Cellar, arch'd over, that may be made so close as to keep out much Air, and so prevent the Damage that Drinks are subject to from their changeable Nature: On the contrary, if you have a mind to have your Bottle-drink soon ripe, keep it above Ground.

When Malt-Liquors are to be bottled off, observe the following Directions. Common, strong, brown Beer of eight or nine Bushels to the Hogshead, brewed in *October*, may, if free and clear of Ferment, be bottled off, at *Midsummer*; pale strong Beer brewed in *March*, may be bottled off, at *Christmas*, under the same Proviso: But always forbear this Work when it's Muddy by Change of Weather, or the falling down of the Crown of Yeast, because then the Drink goes through some Alterations that
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thicken and work it in a small Degree, which causes the Lees at last to receive the Spirits, that are hereby made smaller by the Transaction, and from hence the Liquor is fed till it is ripe for Bottling. To feed bottled Beer or Ale there are several Ways. First, put three Horse-beans into each Bottle of strong Beer, and it will preserve it mellow a long Time. Secondly, put into a Quart of Spring Water half a Pound of Sugar, (the finer the better,) and a Penny-worth of Cloves; boil all together moderately half an Hour, and scum it well in that time; when cold put two Spoon-fulls into each Bottle that is to be kept long, and three to be drank soon; it is such a great Improvement that it is generally made use of by some Publicans to recover their Tap-droppings, which it will do in two or three Days, if the Bottle is kept in a warm Place. I know a Person that puts a little Oyl on the Top of the Drink in Bottles, in imitation of the *Florence* Wine-flask, without any Cork, and it keeps it from Wind in a very lively Order. To keep Bottles from bursting, make a Hole in the middle of the Cork with a Nail or Awl, and the Bottle will never burst, yet will keep out the Wind, because the Moisture of the Drink will swell it: Or put into each Bottle one or two Pepper-corns, and it will never fly. The common Way of making Drink ripe presently is to boil some coarse Sugar in Water, and when cold, work it with a little Yeast, of this put two, three, or four Spoonfuls into a Bottle with two Cloves over Night, and if it stands in a warm Place, it will be ready next Day, and be very apt to swell the Belly of the Drinkers with its windy, unwholesome, yeasty Quality. Others will do this Feat more quick, even in the time a Mug of Liquor is bringing out of the Cellar, though it be Tap-droppings; they'll put a Piece of Diaper or Damask over the Pot or Mug, and with a Jirk turn it Topsy-turvey and back again, which with a Jolt or two more, will cause a frothy Head in Imitation of bottled Drink. Or if Drink is a little prick'd or fading, put to it a little Syrop of Clary, and let it ferment with a little Barin,

Barm, and it will recover it, and when it is well settled; bottle it up, putting in a Clove or two with a little Lump of Sugar into each Bottle.

A private Person used to bottle off a clear Ale, by boiling a Bag of Wheat in the Wort. Another would put a Spoonful of sugar'd Water into each Bottle. Another would have clear Drink to Bottle off, by putting two or three Chalk-stones into the Barrel, or Powder of Chalk.

Thus by trying frequent Experiments, of adding more or less to any of the foregoing Receipts, according to your Palate, you will arrive to the Knowledge of discerning at first view what every particular Subject requires or will bear : And remember that all Liquors must be fine before they are bottled, else they'l grow sharp and ferment in the Bottles, and willn ever be good.

F I N I S.





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A BRIEF
C A S E
O F T H E
DISTILLERS,

And of the
Distilling Trade
I N
E N G L A N D,

S H E W I N G

How far it is the Interest of *England*
to encourage the said Trade, as it is so
considerable an Advantage

To the Landed Interest,
To the Trade and Navigation,
To the Publick Revenue, and
To the Employment of the Poor.

Humbly recommended to the Lords and
Commons of *Great Britain*, in the present Par-
liament assembled.

L O N D O N,

Printed for T. WARNER at the *Black-Boy* in *Pater-noster-row*.
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h. 134.



THE
PREFACE.

A *S almost every thing in this criticising Age is liable to be cavil'd at and disputed, so contrary to the Rules of Charity and good Humour, it is the avow'd Temper, or at least the Practice of the Age, where any thing so disputed is liable to a double or differing Construction, always to take it in the worst.*

To prevent this, and anticipate the Cavils of those who would suggest Evil where no Evil ought to be suggested, a short Preface is thought needful to
A 2 *this*

this Work, tho otherwise plain enough, to prepare the Reader to be at least honest and just, if he should not incline to be candid and generous, in his looking over the following Sheets.

Here's no Apology to be made for Vice, no extenuating of Crimes, no Harangues for Drunkenness ; when, at the same time, the Liquors, which it has been suggested are instrumental to our Immoralities, are, as the Reader may think, spoken favourably of.

But we are stating the Case of the Distilling Business as a Commerce, and of the Distillers as a Society improving that Commerce, for the Good of their Country ; enquiring whether they are a publick Good, and Encouragers of the Trade, yea or no : if they are, the Parliament of Great Britain now sitting will judge whether it is meet to encourage them or not ; and if not, vice versa.

But

But it seems needful to hint, and this is the Reason of this Preface, That the Question does not seem to lie here, Whether the Spirits shall be distill'd and consum'd among us, and whether the Poor shall drink them ? But, Whether the Dutch shall furnish us with them, and cheat and impose upon us, as well publickly as privately, in the grossest and most barefac'd manner ? or whether our own Manufacture shall supply us, our own Growth be consum'd, and our own People employ'd ?

These are indeed very short Questions, and I think few Words will decide them : If the first be encourag'd, and Fraud and clandestine Trade be continued, for want of due Regulations, and proper Measures taken to prevent it, I shall only say it shall not be for want of due Information. But if our own Manufacture, the Labour and Industry of our own People, and the Consumption of our own Growth be encourag'd,

rag'd, as we cannot doubt they will, I take the Liberty to say, the Distilling Trade in England, which is already so much improv'd and encreas'd, will in a very few Years conquer all foreign Importations, all the clandestine and corrupt Management of other Countries, who impose upon us, and even the smuggling and running of French Brandy itself.

The same Ignorance that occasions most of the Prejudice at the Distilling Trade among us, oblig'd me to enter into the Detail of the Dutch Operations with their Malt Spirits; and the first Introduction of Geneva among the common People, which otherwise some might pretend is useless in the Case before us. But 'tis needful we should know Things in their Original, and be able to see from what Fountain every Mischief flows, that we may not lay the Weight where it ought not to lie.

The

The Dutch were doubtless look'd upon as great Benefactors to our Commerce, and who by taking off yearly so great a Quantity of our Corn, were so great an Advantage to our Landed Interest, our Navigation, and our Poor ; and while the Product, let it be what it will, was consum'd abroad, and their Geneva and other Spirits reach'd no farther than their Camps and Fleets (and withal while they did not cheat us in the Draw-backs too, if ever that time was) they were really so.

*But here you will see that it is possible, in the general turn of things, and the Changes which matters of Trade, in common with the rest of human Affairs, are subject to, what is a publick Good to day, may be a publick Grievance to morrow ; and what a Law is made to encourage at one time, may require a Law to prohibit and prevent at another : And this is the true Case of the Dutch Distilling Trade, as it shocks with, and at
this*

this time interferes with our own, as will be seen from p. 24 to 36. of this Work, in which an Account of that Part is given.

Time, and a short Discourse, swell'd also beyond expectation in other needful parts, prevents entring further into these things at present; but by this may be seen the great Difficultys this valuable Business of the English Distillery has struggled with, and the great and just Arguments for its farther Encouragement. All which is humbly submitted to the Wisdom and Justice of the Parliament.

A B R I E F
S T A T E
O F T H E
C A S E
O F T H E
D I S T I L L E R S , & c .

THE Distilling of Spirits, is indeed an antient Art ; and the Distillers Company is antient, having been incorporated in the Reign of Queen *Elizabeth*. But as the Nature of their Business is quite chang'd, that they work in a new Method, and from new Materials, are under new Limitations, and their Interest and Trade stand in a new and quite different Situation from what was the Case formerly ; so it may be said, their very Constitution is modern, and they are young in the Manufacture.

B

But

But however young the Trade may be, and that the Materials they work from are different from what they formerly made use of, it is apparent, that they are infinitely more a publick Benefit to the Nation, than they were before; and that the Distilling Trade, considered in its present Magnitude, is one of the greatest Improvements, and the most to the Advantage of the Publick, of any Business now carried on in *England*.

In former Times, the Distillers, like other incorporated Arts and Mysterys, work'd wholly for themselves and for their own Profit: now they, without a *Pun*, may be truly said to be *publick spirited People*; for they work for the whole Body, and that immediately and in a particular manner.

1. They work for the Gentlemen or Land-Interest, in consuming the Produce of their Soil, and encouraging Tillage and Husbandry.

2. They work for the Tenant and Farmer, in helping them off with their Corn, and particularly in finding them a Market for those Grains of the meanest Quality, and which it would be difficult, if not impossible for them to dispose of to Advantage any other way.

3. They work for the Navigation of the Kingdom; abundance of Shipping and other Vessels, being daily and constantly, and some wholly employ'd, in bringing the Corn and Coal which is consum'd by the Distillers Trade, up to *London*, from the remotest Parts of the Kingdom.

4. They

4. They work for the Poor ; many Thousands of Familys being necessarily employ'd as well in the Husbandry of the Corn they use, as in the Malting it, then in carrying and removing it to and from the Malting-Places, to the Ports for shipping it to *London*, or otherwise to *London* directly by Land.

5. But above all this, they work for the Publick in the extraordinary Sums of Money, which they pay to the Crown, as well in the Excise upon the Spirits they extract, as in the Duty upon the Malt paid before it comes to their Hands, and in the Tax upon Coals.

To explain these Particulars a little farther, tho as briefly as we can, let it be consider'd,

1. The landed Gentlemen must be sensible the Distillers work for them, since the Distilling Trade in and about *London* only, consumes about 200000 Quarters of Corn, and that Corn necessarily employs 100000 Acres of Land for the Produce of it ; for this kind of Corn being generally the Product of the remote Countys, where the Lands are not rich, we may venture to say, two Quarters upon an Acre one with another, is no mean Crop, and is sufficient to make a due Calculation upon.

N. B. The Horses employ'd in the Husbandry of 100000 Acres of Land every Year, and in the Carriage of this Corn to the Malsters, and the Re-carriage of the Malt either to the Market, or to the Port where it is to be shipp'd, tho no guess can be made at their

Number ; yet this may with Modesty be allowed, that those Cattle being very many, must necessarily consume the Growth and Produce of many Thousands of Acres of Land more.

Nor is it sufficient to say, that if those Lands did not produce this Corn, they would produce something else ; or that if the Distillers did not take off and consume this Corn, somebody else would ; seeing it is evident, *England* being now become what they properly call a Corn Country, produces much more Corn than it can consume : And if that Consumption should be lessen'd, many of those Lands must lie uncultivated, as it is manifest many Thousands of Acres did before. It is also a receiv'd Maxim, that every Quarter of Corn which is carried off, and consum'd more than was consum'd before, (no Scarcity being occasioned at Home) is so much clear Gain to the publick Stock of the Nation.

If it be objected, that the Liquor distill'd is consumed at Home, and so is not equally beneficial to the publick Stock, as what is exported ; 'tis answered, (1.) But much of it is also exported, and more would be, if Encouragement were given. (2.) That most of what is consumed at Home, is us'd in the stead and room of French and Foreign Brandys and Spirits, which are generally bought abroad with ready Money, and smuggl'd on Shore to the Ruin of the fair Trader, and lessening the Revenue by a constant abominable Fraud, and which

which it appears no Laws yet made, have been sufficient to prevent.

2. The Tenant or Farmer is particularly work'd for, being assisted by the Distilling Trade, and that in several respects ; as the Distillers not only take off a great Quantity of their Corn, but also take off those Kinds which are not marketable for other Uses : As, particularly, (1.) When thro' long Drought the Grain appears thin and light, as is often the Case ; or by unseasonable Rains in Harvest the Farmers cannot get their Corn well in ; or when by that or other Disasters and Accidents it is damaged, either in the *Field*, or in the *Barn*, in the *Ear*, or in the *Sack* ; in all which Cases the Farmer is put to great Difficulty to dispose of it, and were it not for the Distilling-Trade could do little with it but feed his Hogs, which would not enable him to pay his Rent. (2.) The Farmers have oftentimes Lands which not only will not bear any other Corn, but that for want of Manure and Improvement, (which in some Places is hard to be had) or thro' the Sterility and Poverty of the Soil, are unable to produce either better Corn, or a better and fuller Grain of the Kind ; and which Lands, if they could not employ them thus, must lie waste and untill'd, but are profitably cultivated by the Vent which they find for that meaner Kind of Grain to the Distillers. This is visible in the Northern and Eastern Countys and Coasts of *England*, where a very great Quantity of poor and unimproveable Lands, which

which formerly lay waste, are now plow'd and sow'd, to the Advantage of the poor Tenants, tho much more of the Landlord.

3. The Encouragement given to Navigation by the Distilling-Trade in *England*, is visible in many Branches of it : For the Corn and the Coals which they consume, being a bulky and heavy Carriage, and not to be easily brought far by Land, the Number of Coasting Ships and Vessels of all Kinds are visibly encreas'd since the Encrease of this Trade, and consequently the Number of Seamen employ'd are encreas'd ; the Advantage of which is so well known, it needs not be enlarg'd on : The Coasting-Navigation also being the greatest and best Nursery of able Seamen in the whole Nation.

To the Encrease of the Number of Ships and Vessels thus employ'd, might be added here, the Addition which that Encrease is to all the numerous Trades, both Foreign and Home-Trades, and to the Employment of Hands, and Encrease of Business, which necessarily attends the building, fitting out, furnishing, and victualling all those Vessels. But I forbear to run it out to its full Length, contenting my self to represent that this Trade is a great Addition to the Marine Interest, and an Encrease and Encouragement of all its Dependencies.

That they work for the Poor is evident by their setting the Poor to work, which indeed is the best way of working for them. The Number of Hands employ'd, or whose Employments are bettered and encreased by this Trade,

Trade, would take up a Volume by it self to calculate and cast it up. It is sufficient to say, that as all Encrease of Business is an Encrease of Employment for the Poor, so all Encrease of Employment for the Poor is an Encrease of the publick Stock ; as it enables those People to gain their Bread, who were not able to do it, or not so well able, before. And this again assists the landed Interest too, in abating the heavy Rates of the Parish-Poor, and enabling several thousands of poor People to support themselves and Familys, which must otherwise be left upon the Parishes to maintain.

This runs thro' all the several Branches of Business and People, thro' whose Hands the said Manufactures pass, as well the Distilling Part it self, as the Materials made use of for the Production, as Corn and Coals, and the Shipping and other Carriages already mentioned ; as also the vast expensive Works of the Distillers themselves, the Copper and Iron-Work they make use of, the Vessels and large Utensils, and the Number of Hands employ'd, and the exceeding Charge daily expended by them in all these Things.

But we wave the multiplying Particulars, and come to the last Article, namely, the great Benefit to the Publick, arising by the Dutys with which this Trade is loaded, and which have now for many Years encreased the Funds upon which the Publick Credit has been so long upheld ; and these are considerable in three Branches.

1. The

1. The several Excises upon the Spirits themselves, laid in several Branches and at several Times, and which amount in the whole to above a hundred thousand Pounds *per Annum*.

2. The Duty upon Malt, which is paid by the Distillers in the Price of the Goods, when they buy, and which amounts to a very great Sum.

3. The Duty upon Coals, of which the Distillers consume, by Calculation, above twenty thousand Chaldrons a Year.

The Advantages of this Trade being thus consider'd, it occurs in the next Place, to shew, (1.) That this Trade is yet improving, that it is a growing Trade, and that if not discouraged by unreasonable Hardships and Impositions, it is likely to encrease in an extraordinary manner. And, (2.) That this Encrease is likely to be obtain'd, not by an Encrease of Excesses and Immoralities, but by changing the Gust of the People, from drinking those other Spirits and Brandys, which being manufactured, corrupted, and adulterated abroad, are not only imported, as well clandestinely as otherwise, to the great Injury of the Health of our People, but being bought by our ready Money, are a great Disadvantage to our Commerce, and Injury to the Revenue.

1. That the Distilling Trade is a still improving and growing Business ; and it is worth considering to what a Height, and on what a just Foundation

Foundation it is likely to improve; for if it be already, even while it is not much above twenty Years old, in its present Magnitude, so advanced, as has been already said, as to pay so great a Revenue to the Crown, and employ such a prodigious Number of Acres of Land, besides Ships, Cattle and Men, what may it not do, when by the Improvement of the Art, and the granting such Regulations by which it would flourish, it shall from the mere Goodness of the Goods that shall be produc'd, entirely suppress the Importation of Foreign Mixtures, and even of French Brandy itself; the Spirit distill'd from Corn in *England*, prevailing over them all by the Force of its own Merit?

Nor is this Question unworthy the Consideration of the Crown it self; whether the Encouraging the Distilling Trade, is not really a better and more effectual way to raise a Revenue by it, than loading it with new Taxes, which can have no other Effect than to lessen the Consumption, and bring a rising Manufacture under a Decay.

It is evident, that as well by the Dearness of French Brandy, and the Corruption and Fraud of the Dutch Importation, as by the improv'd and still advancing Goodness of the English Malt Spirit, which I shall make appear is coming fairly up to be equal to the best French Brandy; the great and opiniated Gust of the People to French and Foreign Brandy, is already much abated, and the Consumption of our own Pro-

duct gains Ground on them every Day, to the great Advantage of the whole Nation.

As the Consumption encreases, the publick Revenue encreases of course, without the Addition of new Taxes, with this undeniable Difference to the Advantage of *England*, namely, That this way as the Revenue encreases, all the fore-mentioned Advantages will encrease: The Quantity of Lands to be cultivated, will encrease: The Advantage to the Farmer, the Employment of Cattle, Ships and Men, will all encrease with it; whereas by burdening the Trade with new Dutys, it cannot be pretended the Consumption will encrease, tho the Duty should; on the contrary, if it should decrease, as is most natural, the Dearness of all Goods lessening the Consumption, then all those national Advantages above must decrease in proportion.

As to the weak Pretences of the Malt Spirits being destructive to the Health of the People, they seem only fit to be jested with, as they have been: and I must say, I am sorry to see some Magisterial People have expos'd their Weakness in this Point so much.

They have no where shew'd the World a Reason why as good and wholesom a Spirit may not be drawn from the Corn, (whose mere Decoction in other Preparations is allow'd to be so good) as from any other Materials; and if, as the Learned say, the Spirit only is the nutritive Part of all our Food, whether Meat or Drink,
there

there can then be no question, but that a Spirit carefully extracted from the gross and humid Parts, and faithfully prepared without any Adulterations or corrupt Mixtures, must be as wholesom to the Body, as the same Spirit unextracted and mix'd with the common Liquids by Infusion and Ebullition ; or as any Spirit extracted from other Principles of any kind whatsoever.

As for the Excesses and Intemperances of the People, and their drinking immoderate Quantitys of Malt Spirits, the Distillers are not concern'd in it at all ; their Business is to prepare a Spirit wholesom and good. If the People will destroy themselves by their own Excesses, and make that Poison, which is otherwise an Antidote ; 'tis the Magistrate's Business to help that, not the Distillers. 'Tis humbly conceiv'd also, they would do the same with Foreign Brandy and Spirits, if there was no distilling at Home in the whole Nation.

It is in the next place, humbly offered to the Publick to consider, what a Trade, and how ruinous to the Nation in several considerable Articles, the Distilling Trade in *England* is now opposed to ; and how necessary it is to have that pernicious Commerce, if possible, suppress'd. And this Part is the more useful, because it seems very few, even of our most penetrating Gentlemen, are fully Masters of it.

Were the Foreign Importation of Spirits confin'd only to that Species we call French, which it is generally allow'd is a wholesom and well extracted Spirit ; yet as the French Brandys are a Product infinitely injurious to our Commerce, bought from a Nation with whom we having no Treaty of Commerce, cannot exchange our Manufactures, but must pay for them in Specie, to the evident turning the Ballance of Trade against us : In this respect they are injurious to the Health of the Publick, if not to the Health of particular Bodys ; and consequently 'tis a publick Good to discourage them, and abate their Consumption.

But when we come to speak of the Foreign Spirits, (however falsly call'd Brandys) it is evident there the Case differs extremely, and we are so great Sufferers in that Part, as well in respect to the Health of the Body as the Prosperity of Commerce, and the Frauds put upon the Crown to the great Loss of the Revenue ; that as it is a publick Good in our Distilling Trade, that we gain upon and lessen that Trade, so it must be some Service to expose the Abuses of it, and let our People see how grossly they are impos'd upon in it, both in the publick and private Interest of our Country

To set this dark Commerce in a clear Light, 'tis needful to take notice, by what unhappy Artifice the subtle Dutch Traders are enabled, our own Weakness concurring, not only to underwork us, but to impose upon us, and sell

us Spirits distill'd from our own Materials, cheaper than we can make them at Home; tho as it happens, their Avarice, so natural to their Climate, will not suffer them to make them so good.

First then, we are to suppose they have the Malt from *England*, as generally they have from *Norfolk*, and the Parts adjacent.

The Fraud begins at the very Beginning; for the *Dutch* approving to have their Malt far grown on the Floor, and without dressing and skreening off the Tails, as we call them; the Malster lets it run in such manner, that 20 Quarter of Barley shall measure out 40 Quarter of Malt: I speak within Compals, for it has been known to measure 50 to 60 Quarter, from 20. Now the Fraud of this lies here, The Malt in the Maker's Hands being gaged in the Barley, the Duty, which is 4 s. *per* Quarter, is paid by the Measure or Gage of the Barley wetted; so the Score, or 20 Quarter pays 4 l. to the King.

When this Barley is malted, and the Malt comes to be exported, the Duty of 4 s. *per* Quarter is drawn back by Debenture; and then the Malt being measured anew, the 20 Quarter being encreased to 40, draws back upon that Measure, and so the Exporter receives 8 l. Draw-back, upon that which paid but 4 l. Duty. This is so vile a Fraud, and so openly practis'd, that nothing is more wonderful to me, than that no notice has yet been taken of it,

it, except this, that being so well known no care has been taken to put a stop to it.

But it does not end here : As there is a Draw-back allowed for the Malt-Duty, upon all the exported Malt, so there is a Bounty paid to the Exporter, by the Crown, for the encouraging the Exportation ; and this is 2 s. 6 d. *per* Quarter more, which being likewise paid upon the 40 Quarter made out of 20, encreases the Fraud 5 l. more. So that the Crown pays back to the Exporter 13 l. for every Score of Barley malted, and receives but 4 l. by which it is no wonder that the Malt-Tax should be deficient.

Suppose then the *Dutch* pay a sham Price *per* Quarter for their Malt, and thus receive double for it again, it is no wonder that they can distil a Spirit from it cheaper than the Distillers in *England*, who fairly pay 6 s. *per* Bushel to the Crown for all their Malt, and full 6 d. a Gallon for the Spirits they draw from it.

Nor have the *Dutch* done with us yet ; but let us examine it thorowly, and we shall see a greater Fraud yet behind.

The *Dutch*, I know not by what Error on our Side, are allow'd to import here foreign Brandy, the Duty upon Importation being 4 s. 2 d. *per* Gallon, or thereabouts ; whereas the *French* Brandy pays 6 s. 8 d. *per* Gallon. This our People take up with, and call it *French* Brandy ; and having sufficient Proof that it comes from abroad, are satisfied with it as such.

The

The *Dutch* tell us, it is not *French*, tho we have good Reason to believe that all the real Brandy that is in it is *French*, by which we are cheated that way. But that is not the Case ; 'tis apparent, the *Dutch* mix their own Malt Spirits with this Brandy, and send it to us, while our People, deluded with the Notion that it must be right Brandy, because it comes by a foreign Permit, eagerly buy it for right Brandy, and give a Price accordingly.

Let any one judge then under what Disadvantages we carry on this Trade with the *Dutch*, and how much it is the Interest of *England* to put a Stop to it ; and granting it is our Interest, the next thing is to consider what is the Way to do it : And that is easily answer'd ; the only Way is, to discourage the Importation of their adulterated Brandys, and encourage and encrease the Distilling Trade at home, by which so many Advantages accrue to the Nation, and the Consequences of which would yet be greater than perhaps is expected, or than is thought possible, except by some Men of more Penetration than ordinary, *viz.*

1. The People will by little and little be brought off from being so fond of foreign Spirits, by the Difficulty of coming at them, and the Badness of their Quality ; as we see the Taste of the Nation was effectually brought off from the *French* to *Portuguese* Wines, by the Prohibitions and high Dutys of the late War.

2. The

2. The Distillers here are apparently able to make as good, as fine, as clean and as wholesome a Spirit, from our own Materials, as any of those imported from abroad; infinitely better than the *Dutch*: and as they are every Day improving, will very soon, if they are not discourag'd, be able to outdo even the *French* Brandy itself. And it is apparent they produce so fine a Spirit already, that a very nice Palate cannot distinguish it from *French*; and had they the *Dutch* Trick of importing it from abroad, they might easily sell it for *French* Brandy, among the People.

I foresee, that as abundance of People are apt ignorantly to charge the Immoralities, and particularly the Drunkenness of the Age, upon the great Encouragement of the distilling Malt Spirits; so they would make that growing Evil, a Reason against the just Encouragement, which ought to be given to the Business of the Distillers as a Trade; as if the encouraging the Distillers Business, would be an encouraging of Drunkenness: whereas we are speaking of it, as a needful and an advantageous Commerce; a Benefit to the Publick, to the Poor, and to the whole Nation. And that would be infinitely more so, if it may be encourag'd, in keeping out and putting a stop to that Foreign pernicious Commerce, carried on to our great Loss and Disadvantage. As to the Vice of Drinking to Excess, we are no way concern'd in it; the Brewing Trade, and the Wine Trade, are liable
to

to the same Objections : Yet I do not find it argued by any body, that therefore we must have no Beer, nor Wine.

*So hasty Showers, when they from Heaven flow down,
Are sent to fructify, and not to drown ;
And in the Torrent if a Drunkard sink,
'Tis not the Brook that drowns him but the Drink.*

*But twou'd be hard, because the Sinner's slain,
For fear of Drowning, we must have no Rain.*

But to clear up this Case, upon which so much weak Cavilling has been made, I beg leave in a kind of Historical way, to enter a little into the State of National Drinking in *England*, as it has been, and as it now is. And tho I shall be very brief, I flatter myself it shall be both useful and diverting ; especially, I answer for it, that it shall come directly to the Case in hand ; and clear not only the Distillers and the Distilling Trade, but even all the Liquors they make, from the Charge of being destructive to the Morals of the People, or an Encouragement to Drunkenness and Excess, any otherwise than, nay not so much as, all strong Liquors are so to those, who drink to Excess.

Our Drunkenness as a National Vice, takes its Epocha at the Restoration *Anno 166 $\frac{1}{2}$* . or within a very few Years after. Some run it back to *James I.* Time, and refer us to the Paintings on the Ceiling of the Banqueting-House, for Proof of it ; but I am not writing Satyres ;

I am upon a Search after not so much the Vice, as the Materials and Manufactures upon which it is fed, and by which it was supported.

Joy, Mirth, good Cheer, and good Liquor, were the Solace of the common People in the Year 1661. They rejoiced that after a long Usurpation, the King should enjoy his own again; that after a long Series of Blood and Confusion, and a Civil War in the Bowels of their Country, the People should enjoy a publick Peace and Tranquillity; that Trade should flourish, and Plenty succeed Misery and Want. These were the several Reasons of their Joy; and very merry, and very mad, and very drunken, the People were, and grew more and more so every Day.

As to the Materials, Beer and Ale were considerable Articles; they went a great way in the Work at first, but were far from being sufficient. Strong Waters, which had not been long in Use, came in play; the Occasion was this: In the *Dutch Wars*, it had been observed, That the Captains of the *Hollanders* Men of War, when they were to engage with our Ships, usually set a Hogshhead of Brandy a-broach, afore the Mast; and bid the Men *drink lustick*, then they might *fight lustick*: and our poor Seamen felt the Force of the Brandy, sometimes to their cost.

We were not long behind them; but suddenly after the War, we began to abound in strong Water-Shops. These were a sort of petty Distillers, who made up those compound Waters
from

from such mixt and confus'd Trash, as they could get to work from, such as damag'd and eager, or four Wines; Wines that had taken Salt Water in at Sea; Lees and Bottoms; also damag'd Sugars, and Melasses, Grounds of Syder, and innumerable other such like. For till then there was very little Distilling known in *England*, but for physical Uses. The Spirits they drew were foul, and gross; but they mixt them up with such Additions as they could get, to make them palatable, and so gave them in general, the Name of *Cordial Waters*. And thus the strong-Water-Shops usually made a vast Show of Glasses, labell'd and written on, like the *Gallypot Latin of the Apothecarys*, with innumerable hard Names to set them off.

Here, as at a Fountain, the good Wives furnish'd their little Fire-side Cupboards, with a needful Bottle for a cherishing Cup: And hence, as from wholesale Dealers, all the little Chandlers Shops, not in *London*, and its adjacent Parts only, but over great Part of *England*, were furnish'd for Sale; and to the personal Knowledge of the Writer hereof, and of Thousands still living, not the Chandlers Shops only, but just as is now complain'd of, the Barbers Shops (*Barber Chirurgeons* they were then called) were furnished with the same, and sold it by Retail, to the poor People who came under their Operations.

And why should it be so surprizing a Thing then in our Opinion, that the *Geneva* which,

as I shall show presently, is but the same Thing returned again, should be so generally received among the inferior Poor ? seeing would we but look thus a little way behind us, it would appear that it was so with our Ancestors ; and our poor People are only set down where their Fore-fathers were before them, (as to the Liquors I mean.) As to the Difference of the Quantitys, and whether they drank more to Excess, than our People do now, that is a Question by itself, and not much to the present Case.

But it is objected, They did not drink such destructive Liquors then, as we do now : That is, in short, they did not drink *Geneva* ; for that is the Meaning of it.

This Objection must be spoken to as we go along ; because it comes into the History I am upon ; for it leads me to give a brief Account of what they did drink, and where they had it. I have mentioned the Introduction of the strong-Water-Shops, and petty Distillers, who began this Trade. I come now to the Liquors ; some of their Names were as follow.

Aqua Vitæ.

Aqua Mirabilis.

Aqua Solis.

Aqua Dulcis.

These in *Latin*.

Anniseed Water.

Cinamon Water.

Clove Water.

Plague Water.

Cholick Water, which
in short was *Geneva*.

These and many more
in *English*.

But

But to sum up the whole, *Aqua Vitæ* and Anniseed Water, were the Captains or Leaders ; and the strong Inclinations of the People run all into those two : And in a little while the latter prevail'd over the former too ; and as Anniseed Water was the only Liquor for some Years, the Quantity that was drunk of it, was prodigious great : In a word, it was the *Geneva* of these Times, it was not only sold in the Chandlers Shops, and in the Barbers Shops, as above ; and perhaps in Bulks and Stalls too ; but it had this particular Article attending it, (which we are not yet arrived to with the *Geneva*) viz. That it was cried about Streets, of which, the Memory of the famous *Anniseed Robin*, will be a never-dying Testimony ; who was so well known in *Leaden-Hall*, and the *Stocks-Market* for his Liquor, and his broad-brim'd-Hat, that it became proverbial, when we saw a Man's Hat hanging about his Ears, to say, *he looks like Anniseed Robin*.

This Part, viz. of going about the Streets, and into the Fields, to Shows, and Musters of the Trained Bands, to cry a *Dram of the Bottle*, has not been so long omitted, but that we can all remember it : And the Bumboats, who continue to this Day, crying a *Dram of the Bottle*, in the River, among the Ships, are a Remainder of that Custom, and which was never left off at-all.

I should not however have troubled you with these Instances from *Low Life*, but that it is in the Scene we are now acting ; and this
Anniseed

Anniseed Robin was a magnipotent Fellow in his Day, I assure you.

Having thus brought you back to the Dram-drinking Age, I must let you see how a full Stop was put to it on a sudden, and what became of the drinking World in the mean time.

As all these various sorts of good Liquor had their Meridian, so they had too their Declination, and after some time they fell into a general Dislike : For the French out-did them exceedingly, and pouring in their Liquors at a very cheap rate, and the Goodness of the Brandy recommending it self also, the famous *Anniseed Water* began to lose Ground, and the People took their Drams in plain Brandy ; the Physicians also, on all Occasions, telling the People, it was better than any of their compounded Waters.

Thus the best Brandy being sold for 2 *d.* *per* Quartern, the Poor could have a large Dram for a Half-penny ; and the Fellows that cry'd it about the Streets, carry'd with them little double Dram-Cups, which being held up on one side was a Penny, and on the other side a Half-penny.

This held on for several Years, and the Custom-house Books will shew the prodigious Consumption, till the late Revolution ; when a furious and continu'd War with *France* breaking out, a Prohibition of Trade follow'd, Brandy rose from 2 *d.* to 6 *d.* *per* Quartern, and from thence to a Scarcity, so that none good was to be had. The Distillers not being yet come into the

the way of Distilling from Malt, could not supply them ; and thus the Poor were thrown off from the Dram-Cup to the Alehouse-Pot, to their great Regret, as well as Expence : For now they could call for nothing less than a Pint, which tho for a while it was but a Penny, yet soon after, by doubling the Excise, came up to three Half-pence, where it still stays. And thus I have gone thro' the first Part of my History.

It remains a Question, which I believe is not yet determin'd, tho I see not much Difficulty in it, Whether the Morals of the People were the better or the worse by this Change ? If I may use so much Freedom, I insist that they are much the worse : And as my Reasons for it are of some weight in the present Debate, I beg you will hear them summ'd up as briefly for your Convenience as I can.

1. The Charge was immediately increas'd, and a poor Man that could before be refresh'd in his Labour, at the small Expence of a Half-penny, was now oblig'd to spend three Half-pence at a time, as often as either Necessity or Inclination call'd him.

2. The Expence of Time was immediately also increas'd ; for then poor Men in their Stalls, or Garrets, or Shops, or wherever they were at their work, could call in, and call up, poor *Anniseed Robin*, or any of his Contemporaries or Successors, and take a Dram, without the least Loss of their Time, and go on with their
Work :

Work : Or if they were at Day-Labour in the Field or the Street, in the Wet and the Cold, they could call for a Dram for a Penny or a Half-Penny, as their Pockets could afford, and go on with their Business ; whereas upon this Change the Poor were really distressed, and they made loud Complaints of it, as I very well remember.

Having thus gone thro' the History of what's past, and given you some Account of the manner of our Drinking till within these few Years, allow me to bring it on to our own Times, and view our Poor in the present Situation of their great Affair, I mean of Liquor ; for what they shall drink is (I assure you) no matter of mean Concern to them.

The Poor, as above, having been reduc'd to the miserable Necessity of this Alehouse-Tippling, and grown sick of the tedious and dull, as well as expensive way of Drinking, were apparently ripe for a Change, if they could have found any way to their Advantage ; when on a sudden the diligent *Dutch*, fruitful at *Invention*, as the *English* are at *Imitation*, (and with their own Advantage at the bottom you may be sure,) help'd them out again, *as they had done once before* : for the *Dutch* Sutlers carry'd into the Camps in *Flanders*, during the late long Wars against *France*, a certain new distill'd Water call'd *Geneva*, being a good wholesom Malt Spirit, if rightly prepar'd, wrought up with Juniper-Berries ; a Thing not only wholesom, but really physick, and for
many

many Years allow'd to be so by the most celebrated Physicians.

It was strange to observe, how this Liquor prevail'd in the Army ; how the Soldiers were surprized at the Goodness of it ; the Spirit, the Vigor it put into them : They declar'd publickly to one another, there never was any such Liquor heard of in the World ; it put a perfectly new Spirit, and new Life into them ; and invigorated them at such a rate, that it made them quite a new kind of People.

At first, like the Champaign and Burgundy, it was drank among the Gentlemen only ; a Drink for Generals, and for Officers : Nay, they tell us in *Holland*, that even the great D— of M—— gave it a Character as a Thing that inspir'd Nature with a new Flame ; and put a sort of Vigor into the Mind, which Nature itself was a Stranger to before ; and that he recommended the (moderate) Use of it, to the greatest Men, when they were going at any time to engage the Enemy.

It is a great Mistake to argue from hence, that the *Dutch* always made their Soldiers mad with Drink, before they led them out to fight ; for what I am saying of them now, is of the Generals and Officers, before the Soldiers came to have any fellow-feeling of this Article.

At first, no doubt the *Dutch* made a fine Spirit of it, and as perfect as it was possible to be expected : But as the *Dutch* are hardly to be charged with any Deficiency in needful
E Craft,

Craft, and that they saw plainly what was good for the High, was also good for the Low ; and that the poor Soldiers Money was as good to them as the great Generals, if they could but make it out in Quantity ; they soon came into the old Trading Maxim, *viz.* that Cheapness causes Consumption, and found out a Way to make a Sort of the same Spirit, and drawn perhaps from the same Ingredients ; that being made meaner in Quality, should be proportioned to the Purse, as well as to the Palate of the common Soldiers.

And thus the Soldiers in the Confederate Camp, came to the honour of Drinking upon a Level with their Officers, or at least, flattering themselves that they did so, which indeed was almost the same Thing ; and if there was any apparent Difference, it was such that neither Officers or Soldiers were wise enough in their Palates to judge of.

It would interrupt our Business and the main Design of this Work, to dwell too long upon the particular Steps and Gradations, by which *Geneva* gain'd so much upon the Minds of the common People ; or to enquire into the Reasons of it : If what I have said, *viz.* its being thus approved by their general Officers, gave the first Occasion, it is sufficient to tell you, that by this means the *Geneva* gain'd a vast Credit among the *Dutch* Troops ; from the *Dutch*, it spread universally among all the Confederate Armys ; and the *English* Soldiers became as great Admirers of it, as any other Nation whatsoever ; except the mere *Dutch* themselves,

themselves, for they indeed drank it like Mothers-Milk.

But you are to take notice here, that the subtle Distillers, and particularly the wise Merchants of *Amsterdam*, who had felt the Sweet of the Trade, had consulted together to bring this Part to sute with their Interest also ; namely, That the *Geneva* which they sent to the Army for the Use of the Officers and Gentlemen, (especially General Officers) bore a different Price from that which was open'd for the ordinary use of the Army, and for the common Soldiers : Whether it differ'd in Virtue and Value or not, I cannot enter into here ; for in such Liquors as these, I shall not answer for it, that what is sold for the highest Price, is always of best Quality in proportion : sometimes, Fancy grounded upon an advanc'd Demand, answers to Goodness, and makes an Equivalent to the Quality of the Liquor ; nor could those little needful Frauds be always carried on without it ; but of that by itself.

Let this Part be one way or other, and be the Liquor better or worse, this is certain, the Price was reduc'd in the common Suttlers-Carriages ; and the poor Soldiers had their *Gin* at a Rate fit for a poor Soldier to pay : And this too betray'd a Secret in the *Dutch* Commerce, which it has been proper to mention already ; and for the sake of which, this Part has been mention'd here ; and is absolutely necessary to speak of, namely, That the *Dutch* were ena-

bled to bring down the Price of their *Geneva*, even without reducing the Goodness.

I must be allow'd to say, that it seems exceeding hard, that as our Distillers were not then come into the Thing, and that *Geneva* was not known here; they should find themselves so oppressed, at their first Entrance; and the *Dutch* should be able not only to make their own Spirits *Cent. per Cent.* cheaper than we could, but that they shall be still able to import them upon us fifty *per Cent.* cheaper than we can make them, and yet raise them from the same Materials, namely, from our own Corn.

And here there is such an allow'd Concession made by the whole Legislature of *Great Britain*, to one of the Articles summ'd up in the first Part of this Work, namely, of the vast Advantage the consuming of Corn is to the Landed Interest, that I could not but remind the Reader of it; namely, The allowing back all the Duty upon Malt, and 2 s. 6 d. Bounty-Money upon the exporting it as Barley, which if the Sums drawn back by Certificate, in the Counties of *Norfolk* and *Kent* only, are cast up, will appear surprising in Value: I say, it is a full Concession to our Argument, and nothing but a full Conviction that the exporting it, is infinitely advantageous to *Great-Britain*, can be a justifiable Reason for it.

Were the Commons of *Great-Britain* to have been told when that Law was made, that all or the greatest Part of the Bounty, whatever Sums were drawn from the Publick by it, would
only

only have two Effects, and both of them pernicious to the British Commerce in general, and to the Revenue in particular; it is my Opinion they would have consider'd better of it, before they had pass'd it into a Law, or have put it in the Power of a voracious Set of Men, to have ruin'd so great and rising a Manufacture, and Branch of our Commerce, at our own Expence.

Were those Bountys taken off for a while, or were they reduc'd a little to a tolerable Degree, the Consequence would presently be this, That the *Dutch* could no more draw a Spirit 50 *per Cent.* cheaper from our own Materials, than we could, or import it upon us, mixt among *French* or other Foreign Brandys, so much to our Disadvantage.

What Reason can be alledged, why the *Dutch* should be able to extract a better Spirit from the same Goods? Nay, it is evident, they do not, and we are assur'd they cannot; but they have gotten into a Course of uncontrolled K——ry, and by this they can send it over cheaper, and that is sufficient to all the rest; for Cheapness causes Consumption.

But to return to the Article above: When first the *Dutch* came into this Trade, as I hinted before *p.* 25. they took their Malt so rough, so grown, and so undress'd, that it was frequent for a Score of *English* Barley at that time, to hold out 50 to 60 quarters of Malt, at the Exportation; which accordingly magnified the Fraud, and entitled the Exporter to receive back twelve Pound for a Score of Barley;

ley ; which upon being gaug'd in the Cistern, paid to the Crown but 4 *l.* Duty ; and so again in the Bounty : But they have been pleas'd to be a little less barefac'd since, and have (thanks to their Modesty) reduc'd it by a slight Dressing, as above, to forty Quarters for twenty.

N. B. There is a little Cavil which may be rais'd here ; and we doubt not our Opposers will think, they have some Advantage in it, namely, That the Barley does generally swell one in the Score, before the gauging : but we may answer that by itself.

To what Extremes do we see wise Men run, upon wrong Information of Things ; and yet how little Care do they take to be rightly and better inform'd of the Things they are mistaken about ? It will perhaps be very hard to persuade Men of common Sense to believe, that the *Dutch* can import their Spirits extracted from our Materials, 50 *per Cent.* cheaper than we can make them ; and yet, at the same time prove too, that all the ordinary Parts of the Workmanship about them, may be performed as cheap in *London*, as in *Amsterdam*.

But it must be confessed, that when they come to be more fully and rightly inform'd of things, and to see what a Cheat is put upon the *English* Crown, in the Conditions upon which they get their Corn, which are the Materials ; the Riddle is expounded presently, and we cannot suppose Men to have common Sense, who will not then open their Eyes to it.

But

But to come back to the Camp: Our Soldiers tasting this Liquor, brought the Desire, as well as the Fame of it, over with them *at the ensuing Peace*; and our Distillers preparing it as well here, as the *Dutch* abroad, they supply'd the People with it, wrought from our own Corn the Product of our own Land, very much to our Advantage, as has been said already: the Encrease of the Demand, afterwards encreasing the Consumption of our own Malt, to a very great degree.

It seems, *Bacchus* and the *Brewer* take Umbrage at this Invasion: and tho' what between the *Wine-Brewer*, and the *Beer-Brewer*, they have had the poisoning Trade to themselves so long, that one would think they should be satiated with the Mischiefs of it, tho' they were not with the Profits, yet it seems they do not sit easy under it; tho' I am told the Pretence of the Brewing Trade being declined on this Account, is but a Pretence, and no more. It seems they could have been content with it in the Apothecarys Shops, and allow'd it among the *Materia Medica*, to pass for good Physick: but when they found it applied to the defeat of *Tippling* and *Sotting*, as above, they resolv'd against it, as fatal and destructive to the Health, and Understanding; and that as to the Tempers of the People, it was safer to be drunk with any thing, rather than *Geneva*.

It is a poor Foundation to raise Clamour upon ; *viz.* To single out the vicious Temper of the Poor, to exclaim against ; when here is a Vice in our Trade, that wants reforming first, and which if an End were put to it, would both do the Crown and the Revenue Justice : It would block up the Door to any more *Dutch* Cheats, (of this kind at least) and put it into our own Power to reform the rest with more ease ; and till then, I doubt, it will never be reformed, while we live.

It has been suggested by some, (how weakly, we shall see presently) that burdening the Distilling Trade in *England* with new Dutys, will be a Means to cure all the Evils which they acknowledge seem to be growing upon us, by the immoderate Use or drinking of the Malt Spirits, among the Poor. If these Mens Zeal for the Reformation of the People, was no greater than their Knowledge of the true Interest of their Country ; they would never propose a Method which should only shut the Door against the drinking our own Manufacture, our Spirits distill'd at home, and open the Door to a Flux or Tide of the same, or worse Spirits imported from *Holland*, and so bring in *Dutch* Drunkenness among us too : which, by the way, is yet something of a worse kind than our own, feeding the Intemperance of the People with the same or worse Ingredients ; but giving the *Dutch* the Profit of it, and leaving us nothing but the Poverty and the Crime.

Had

Had not this preposterous Notion started itself into the World, just when these Sheets were in the Press, and so fair an Opportunity was left to answer and expose it, this Tract had not swell'd to such a bulk: but since the Politicks of these Gentlemen have taken such a Turn, and this Flight of their Wit has carried them to such a height, I must trespass a little on the Patience of the Gentlemen, that shall see these Sheets, to give in a Word or two, upon so weighty a Suggestion.

All wise Crowns, and ours of *England* in particular, make it a Maxim in their laying Dutys, *never by loading their own Product*, to encourage Importations from abroad, in prejudice of the same Goods manufactur'd at Home. But if it shall be prov'd,

1. That burthening the *English* Distillery, will only serve to encrease the Advantage of Foreigners, and ruin the Manufacture of Spirits distill'd from our own Corn at Home; how will it answer the wise Maxims of State and of Trade, which we all depend so much upon?

2. If it shall appear that such a burthening the Manufacture at Home, will but encrease the Frauds of Foreigners; and instead of detecting the vilest clandestine Commerce in *England*, and the opennest and grossest Abuse of Parliamentary Bounty, with a lessening to the publick Good, which it was appointed to encrease; where then will the good End of the Parliament be answered; and how well are such People qualified for Politicians?

And if after all it should further appear that the Proposal itself comes from a Quarter where no such sanative Principles as these of preserving our Trade are to be found; but that it is all from a View to separate and corrupt Ends, tending in themselves to support the Interest of a Set of Men, who carry on a Trade a thousand times more pernicious to Trade and to the Morals of the People than this: I say, if this should be prov'd by it all, then it must give a new Turn to our Conceptions about these Things themselves; we must run 'em all over again in our Thoughts.

Let us then endeavour to state the Case clearly, among us.

1. That the *Dutch* do cheat, and impose upon us already, most grossly and barefacedly; or rather to put it right, the Exporters of the Malt to *Holland*, do cheat and impose upon us: (for if the *Dutch* are not the Men, let us not wrong the Devil, but lay the Saddle on the right Horse.)

2. That by this Cheat, let who will be in it, the *Dutch* Distillers (for we are not talking of the *Dutch* as a Nation, but as Traders, and especially as Distillers) are enabled to buy their Malt for less than half the Price which our *English* Distillers give for it.

3. That by this means they are likewise enabled to work their Spirits (whether the *Geneva* or other Spirits) for we are not now speaking of one sort more than another, so cheap as to sell them one time with another for at least 50
per

per Cent. less Price, than our Distillers can work them for, from the same Materials.

4. That by the Advantages, Disguises, and various Kinds of crafty Ways which the *Dutch* have, for disposing and dispersing these Spirits among our People, under the Names of Foreign Brandys, and by the Aid of Foreign Permits, (for they always find the way to make us the Tools of our own Delusions) they have an Opportunity to sell that 50 *per Cent.* dearer than we do, which they can make 50 *per Cent.* cheaper.

Let any considering Person take these Things in pieces a little, and examine them separately.

All Errors and Mistakes of Mankind, are much better and easier prevented in Principle, than corrected in Practice; as Fire is easier suppress'd in the Sparks, than in the Flame: The first and grossest of all the Mischiefs that can be complain'd of in the Distilling Trade, are founded in this Original Fraud of putting 13 *l.* of the Crown-Money in the Pocket of the Exporters, for every Score of Barley which is malted for their Exportation, whether to *Holland* or any other Part, and for which they pay 4 *l.* Duty, and no more, or very little more, as has been said.

Let us first see the Magnitude of this Cheat, and then a little of the Consequence of it: Suppose the *Dutch* take off an hundred thousand Quarters of Malt a Year for their Distillery; if I under-calculate it, the Gentlemen can make an Allowance for that, upon all their own

Estimations ; and I doubt not but I speak much below the Quantity : But, I say, suppose the *Dutch* take off for the Use of their Distilling Trade, one hundred thousand Quarters of Malt from *England* every Year ;

l. s. d.

This ought by the Malt Debentures to draw back after the rate of 4 s. Sterling *per* Quarter, which is in the whole — 20000 00 00

And for the Bounty allow'd by Act of Parliament, on the Exportation of it as Corn, it ought to receive also 2 s. 6 d. *per* Quarter more, which is upon the whole — 12500 00 00

Total 32500 00 00

This Encouragement, were there nothing more in it, is very considerable ; and gives the *Dutch* a vast Advantage over our Distillers here at home, who pay this whole Duty without any Draw-back, Bounty, or other Encouragement whatsoever ; except it be, that they also pay a heavy Duty upon the Spirits again, after they are distill'd ; instead of which, the *Dutch* sending their Spirits hither, by the help of another Fraud subsequent to all the rest, have a Price for theirs superior to ours, and pay no Duty at all ; and whatever Duty is paid, we pay it our selves, as we are the last Consumers.

But

But after we have considered the heavy Weight of 32500*l.* upon every hundred thousand Quarter of Malt, which the *Dutch* take off, and the Disadvantages which our Distillers lie under upon this account, let us add to it, what is mentioned *p.* 13. and undeniably made out, namely, That the *Dutch*, or somebody for them, draw off from us just two and thirty Thousand five hundred Pounds Sterling more, upon every hundred Thousand Quarter of Malt they take off, and which is done by the mere Craft and Fraud of the Exporter, as has been said; which our Offices are so supinely negligent in, as to pass upon themselves for Law; or our Officers so well interested in as to connive at. I do not pretend to enquire, whether it is Ignorance or Corruption, let the Gentlemen concern'd acquit themselves of it as well as they can; it is equal to the poor discourag'd Distillers, whether they are oppress'd by one or the other; 'tis manifest they are oppress'd by it, be it which way it will: 'tis the same thing, if my House be fir'd, whether it were done by a *Fool-Servant*, or a *Rogue-Servant*; the House is burnt, and I feel the Loss, let it be done how it will.

Not but that it may come in my way in this Debate, to say something of the probable Causes, or at least the Encouragements of these gross pieces of Fraud; and how a wise Nation, as we are esteem'd to be, or at least think ourselves to be, should come to shut our Eyes so
appa-

apparently to our own Interest, as to lie open to such Cheats as these are, and to be so abus'd every Day ; nay not to shut our Eyes to them, but to be abus'd with our Eyes open, (for certainly this can never be said to be a Secret) if it has been practis'd so long, and never seen before ; we must have been as unhappy in the Ignorance, as I think we are expos'd in the Fraud of it.

But to return to the Point, about loading the Distillers Trade with farther Weight : I would humbly recommend to those Gentlemen who have this Design under Consideration, if any are so weak, that they would first consider of unloading it ; and then they may put it into a Condition to bear any Hardships they shall afterwards put upon it, with the greater Ease.

Let them unload it from the dead Weight, which these clandestine Practices are not to the Trade only, but to the whole Nation ; for in short, 'tis a Tax levied upon us, to give to a set of clandestine Traders : whether they are *Dutchmen* or *Englishmen*, or any Men, where the Malt is ship'd for *Holland*, 'tis the same thing, 'tis a National Grievance, and a Burden upon the Trade, which ought to be removed.

All Inequality of Burthens, is a Prejudice to the fair Trader ; in the Sense of which Maxim, it has always been the Care of our Crown by an Equality of Burthens, to give the fair Trader a due Advantage : Hence smuggling

gling and clandestine Trade, is on so many Accounts guarded against, and by so many Laws made criminal among us, tho so impossible to be fully prevented.

But here is a Law, which however good in it self, and intended with the same just View, is unhappily, and by the Craft of a set of Foreigners, perverted, the Point of it turn'd upon the fair Traders ; and the greatest clandestine Fraud that ever was, (of its kind) practised in *England*, is set up by its Authority : So that the Cheat is supported by the very Law that was made to prevent it ; nay, it is founded upon the very Execution of that Law of Equality, on which Justice was to have been expected.

Instead of an encouraging Draw-back, by which the Consumption of our Growth was supposed to be secur'd, and in order to which the Exporter to have the Benefit of all ; the Duty that was paid being return'd to him, he receives 4 *l.* per Score in one Article more than ever was paid, and 2 *l.* 10 *s.* in another, more than ever was intended.

I have often heard it spoken of, with some wonder, in *England*, how it came to pass, that in some particular Places on the Coasts, the Draw-back upon the Duty on Malt came to more than the Duty it self ; as was alledg'd once likewise in the Affair of the *Salt-Duty*, and by which, as I have been told, a gross Abuse of the Publick afterwards was detected. Whether it was so in the Salt or no, and how
it

it came about, is none of my Business : But if it be so likewise in the Malt Draw-back, I believe, upon a due Enquiry into the Reason of it, some of these wicked Things might come to light, and perhaps more than some People are aware of.

But to reduce all this to the true End for which all such Complaints ought to be made, namely, the preventing the like ; and supposing it to be detected and prevented, as we hope it may, what are we to enquire next ?

The next Question is, How would this reform the Abuses of the Distilling ? My Answer is direct, in two Heads.

1. You would then have no Abuses to correct but our own ; whereas now all the Corruptions and Adulterations of Foreigners, are put to our home-Account.

2. The Distillers then being, as is said, again secur'd and form'd into a Body, with due Powers to act by, and sufficient Encouragement, are able to answer for all Abuses of the Trade, that is, they are able to answer that there should be no Abuses committed, no unwholesom Liquors distilled, or sold if they were distill'd.

This being the Case, there would be nothing left for the Crown to be concern'd in, but to prevent if they can, the Intemperance of the People,

Nor would such a Regulation want its Encouragement even in the Nature of the thing ; there are many Ways to encrease the Revenue,
besides

besides loading Trade with new Taxes. If this particular Branch, clogg'd with Difficulties, and oppress'd by Foreigners, Smuglers, and the like, may be set free from those Oppressions and Weights, giving it room to encrease, encreases the Revenue of course ; whereas while it sinks under those Weights, adding Dutys only serves to sink it deeper, and so even lessens the Revenue which it paid before.

This was the Case exactly with the late high Dutys upon Pepper ; while those Dutys subsisted, the Revenue was devour'd, I think I may say wholly devour'd, by the Draw-backs ; and all the Home-Consumption of Pepper was supply'd by clandestine Trade, that is to say, by Smuglers ; whereas those high Duties being again taken off, the Trade return'd into its own Channel, and the Revenue reviv'd which was sunk before.

Thus if the Distilling Trade should be loaded with more Duties, while these Frauds on the Foreign Trade still remain unredress'd, what must be the Case but this, namely, The Foreigners would have all the Business, and the Distillers might put out their Fires and sit still ?

But I meet with another popular Objection still, and it shews a little from what Quarter all the rest has come. The Objection is this :

That the Distillers pay too small an Excise, that they may pay a little higher Duty very well, and that they do not pay an Equality with the Brewer upon a Quarter of Malt.

G

Now,

Now, tho this seems a little envious at best, supposing we should grant the Suggestion, as if the Brewer was uneasy that any Malt should be consum'd but what should pay as great a Duty as that which their own Trade pay ; yet as it happens not to be so in fact, it exposes the Objector so much the more, and leaves us to guess (a little the plainer) whence these Clamours at the Distillers had at least some of their Original. I shall enquire into the Particulars presently, but shall name another Objection of something a like nature along with it.

It is also said, there is a sudden and great Decay of the Brewing Trade in *London* ; and this too they would place to the account of the Distilling Trade ; as if the Distillers were rising upon the Fall of the Brewers ; all which are mere groundless Jingles of a few designing Men, who would deserve more regard if they spoke truth, and as they are mistaken, deserve indeed little or none at all.

It is true, we have not room here to give a large and particular Answer to all these Cavils ; for such we hope to prove them to be, and no more. But yet we cannot close this Tract without letting them know that we have heard all they have to say upon these material Heads ; which upon the whole, amounts to but very little in Substance, tho much perhaps in Noise and Pretences. The whole may be briefly answer'd in the following Particulars, reserving a more full and particular
Answer

Answer, as we may hereafter see occasion. But to take them as they lie :

1. It is so far from being true, that the Distillers pay less Duty upon a Quarter of Malt than the Brewer, that 'tis evident they pay *more*. And not to enter at this time into a Calculation of the Particulars, here not being room for it, this we may undertake to assert, namely, That the Distillers pay near 12 s. *per* Quarter upon the Malt they use, allowing a just proportion for its being not drest down to the same Fineness, and consequently the same Measure as that of the Brewers.

Whereas on the contrary, the Brewers, the Dressing of their Malt being likewise consider'd, do not pay above 8 s. to 8 s. 6 d. on each Quarter.

For let it be considered here what is observ'd already in its place, and ought to have notice taken of it on all occasions ; namely, that for the Double-Beer, Pale-Ales, Stout, and such like Drinks, which the Brewers now run so much upon, and in which they do not draw near so great a length from a Quarter as in the ordinary Brewing, they of course do not pay so much to the Crown for the Excise ; nay, for these Liquors they may be said not to pay six Shillings *per* Quarter on the Malt : whereas the Distillers always extracting the utmost Spirit the Malt will put forth, and paying as much Duty for the meanest Malt as the Brewer does for the best, has an infi-

nite Disadvantage, and pays more for his Malt, by how much the less Spirit he extracts from it.

This, as above, will require a more full Explanation, and on occasion such an Explanation will not be wanting; but in the mean time, those who make the Objection know so much of the Truth of it, that they are able to save us the Labour, and answer themselves, tho at this time perhaps such generous Treatment may not be for their Interest.

I go back then to the first Head, namely, That there is a great and sudden Decay of the Brewing Trade. My Answer is,

1. There has been no apparent Decay of the Brewing Trade, one Year with another, for above four Years past, to last *Midsummer*; what Decay has been must be since that time.

2. By consequence then the great encrease of the Consumption of Spirits in *England* has not been the Cause of the Decay of the said Brewing; for as that Encrease has been of three or four Years continuance, why, if it decay'd the Brewing Trade, was it never felt till since *Midsummer* last?

3. There has been no proportion'd Advance upon the Distillery since *Midsummer* last; why then should the Decay of one be occasion'd by the other, which has not felt the Effect of it? If the Distilling had encreas'd in proportion during that time, and that, so much more than ever it had done before, then indeed the Water of one Channel being found in the Stream

Stream of another, would account for the difference. But as that is not so in fact, the Deficiency must be from some other more apparent Cause, and that we shall see presently.

The apparent Causes of the Decay or sudden stop of the Brewing, so far as the Fact may be granted, (for it is not so mighty in Fact as in Noise) are these :

1. The excessive Dearness of Hops the last Season, which was so heavy a Rent-Charge upon the Brewer, that it really put a check to their whole Business ; and some of them found it hard to furnish themselves with a suitable Stock upon any Terms whatever : That Difficulty has of course caused them to lessen the Quantity of Beer among their Customers, as much as they could, when they came to lay in their Stores.

2. The Dearness of Malt it self, which by the universal Badness of the Season in all the Malting Counties, has had an effect upon the Malt as well as upon other Grain ; this has both lessen'd the Quantity and advanc'd the Price, so that Malt in particular has been 5 to 6 s. *per* Quarter dearer this Year than it was the last. These things have been so apparent, and here so well known to other People as well as to the Brewers themselves, that 'tis something strange they should lay themselves open to so effectual a Reply.

But this too will appear less strange when we shall add, that the K—ery of the Brewers themselves, to say no worse of it, may have some

some share in the Reasons for a sudden Decay of their Trade ; especially if it be true that they have come into that bare-fac'd piece of Policy, *viz.* To strike their Work in order to lessen the Excise, and so make a joint Clamour for promoting the Design. But of this we may say more in its proper Place.

But now, to put in a Word for the Poor, as well as for the Trade, and so to close this Discourse ; you must allow me to say, that were it so that they had quite forsaken the drinking Beer and Ale, and were wholly come into the drinking of Spirits, Brandy, Geneva, or what you please ; it seems to me they have done not only that which their Ancestors did before them, but even what their Superiors have seem'd to lead them into just now, by a general Example. As follows,

There has been for some Years, and still continues among us, a national Gust or Inclination to drinking stronger and higher pric'd Liquors than formerly ; I do not say we drink more, or more to Excess, that is a Subject of another Nature, and however true, is not to my present Purpose. But the Stream of the Nation's Palate runs, I say, for stronger and dearer Liquors. Let me begin at the Head.

The *Ladys* and *Gentlemen* of Quality and Distinction, not content with the usual, and as I have said above, most wholesom Dram, call'd right *French* Brandy, now treat with *Ratafia* and *Citron*, at a Guinea a Bottle.

The *Punch Drinkers* of Quality, (if any such there be) not contented with the best *French Brandy* in their Bowls, must have *Ar-rack* at 16 s. to 18 s. per Gallon.

The *Wine Drinkers* of the better sort, not content with the *Portugal* and *Barcelona* Wines, must have high Country *Morgeau*, *O Brian* and *Hermitage* Clarets, at 5 s. to 6. per Bottle ; and after that *Champagn* and *Burgundy* at 7 s. to 8 s. per Bottle.

The common *Draft* of Red Wine of *Oporto* and *Viana*, tho all stronger than the *French* Wines formerly drank, is not now strong enough for the *Citizens* ; but they must be *made up* (so the Wine-Brewers call it) with *Lisbons*, with *Alicants*, and *Bene-Carloes* : and the *Oporto* and *Lisbon* Whites, tho very strong, are turn'd out of Doors, for the yet stronger *Mountain Malaga*.

To descend still lower : Our common Drinkers of *Ale* or *Beer*, are not contented as formerly, with the ordinary *Beer* and *Beer*, or Porters *Ale* ; but they are advanced, first to *Two-penny*, then to *double-Beer*, and *Stout* ; and now to the strongest North-Country *Burton*, and *Tamworth Pale Ale* ; *Dorchester* and *Newbury Beers*, and the like ; of which great Quantities are brought up by Land Carriage, above 100 Miles, and for which, above 300 small-Brew-houses, have, as I am told, been erected within these few Years, in the City and the adjacent Parts ; which Ales are sold from 6 d. to 10 d. per Quart.

In

In like manner then, the Poor following this unhappy Humour of the Rich, and finding themselves as willing to gratify their Palate, only not equally able to bear the Expence, are fallen into the old Dram-drinking Way, which their Fathers practis'd before them; and which, as it is easy to their Pockets, spends less of their Time; and unless they please, no more prompts their Excesses, than the *Beer* and the *Ale* did before; and if I may give my Opinion, I think indeed not so much. And thus I have brought down the History to our present Times.

I shall close this Tract, which is already swell'd to a larger Bulk than was intended, with a few very short Hints at the Disadvantage which the Distillers at present are under in the Course of their Trade, and which they hope to be deliver'd from, by the Justice of the Parliament, and the Encouragements which they have reason to hope for and expect.

Some of the Disadvantages they are under, are as follows.

1. That whereas all the Malt exported to *Holland*, and from which the *Dutch* extract the Spirits which they import upon us, draws back the whole Duty, besides a Bounty of 2 s. 6 d. per Quarter to the Exporter (not to speak of the Fraud mentioned above, and which doubles both the Draw-back and the Bounty) yet our own distill'd Spirit upon Exportation draws back but 4 l. 4 s. per Tun of the

the Excise paid, and nothing at all of the Malt Duty.

Thus the *Dutch* are enabled exceedingly to under-work and under-sell the *English* Distiller (even by our selves) and at the Expence of our own Crown, whom they so many ways injure in the said Allowances.

2. That by the Advantages given to the *Dutch* for the importing Brandy 2 s. 6 d. per Gallon Duty less than the *French*, which Dutys are also paid by the Importers, not by the *Dutch*, they have an unrestrain'd Liberty of imposing their Mixtures upon us, of a baser Kind ; which Mixtures, because they apparently come from abroad, and are called Brandy at the Custom-house, our People are easily persuaded to take for true Brandy, whereas it is very well known, that many times it is inferior to our common Malt Spirits, and our Distillers affirm, they are able to out-do even the best of it.

The *Dutch*, by the like Artifice, come into our Rivers and Ports, or at least into the open Roads where our Ships ride, as in *Yarmouth* Roads, the *Downs*, *St. Helens*, and even into the River of *Thames*, up to the *Nore* and the *Hope*, and there supply our outward-bound Ships with their Spirits, or Brandys (as they call them) not only for the said Ship's use, but also in Quantities for Trade ; for all which no Entry is made, or any Duty at all paid : So that our *Guinea* and *East-India* Ships in particular, which used to take

in large Quantities of Liquors of our Distillers, go away now with little or no Stores, depending to be supply'd by the *Dutch* in the *Downs* and other Places.

These are all great Obstructions to the Distilling Trade; and as they are withal great Abuses upon the fair Traders in general, and injurious to the Crown in particular, we cannot doubt, but if fairly represented, the Distillers shall have such Relief, as in right and justice they ought to expect.

Besides these apparent Discouragements in favour of Foreigners, and in favour of clandestine Trade, they are unjustly attack'd with Clamours and popular Pretences, as if their Trade was a publick Nuisance, and ought to be regulated by the Magistrates; suggesting, that their Liquors are unwholesom, and destructive, Incentives to Vice, and tempting to the Poor, to the Waste of their Health, Money, Time and Understandings; Things which tho not worth replying to, their apparent Partiality being sufficiently already exposed, and as all the Excesses of the People, either in these Liquors or any other are founded in their own Intemperance; the Distillers say, if they may obtain such Powers and just Authority, which as a Company they once had, and still ought to have, and which other Companys in Cases less essential to the Health of the People now have, so as they may be able to inspect and regulate the Trade as it ought to be regulated, they would answer to the World for the wholesomeness

ness of the Liquors they extract, and appeal to the Understanding and Sense of the most experienced Physicians, if unprejudic'd.

As for the learned and worthy Physician, who, if Report lyes not, is to be employ'd to shew to the World the pernicious Consequence of drinking *Geneva* or Malt Spirits, and how many Thousands it has slain, we impatiently wait his elaborate Performance; and to help it forward, only beg he will not omit to prove also, the few needful Particulars following.

1. That the Malt Spirits made in *England* are much more pernicious than those made in *Holland* and sent over hither, tho made all from the same Materials.

2. That the Liquor call'd *Geneva* is mortal in it self, and that the Juniper-Berries put into it are Poison.

3. That it is the Liquor it self, not the immoderate Use or Excess of it, that does the Mischief.

4. That 'tis much better to be drunk with Strong-Beer and Pale-Ales brew'd from Malt, than with Spirits extracted from the same Malt, tho it is the Spirit alone in the Beer and Ale that intoxicates.

5. That Drunkenness by Ale and Beer, destroys no Health, wastes no Time, spends no Money, weakens no Understandings; and that it is only the *Geneva* that does such wicked Things as those.

6. That there are more People drunk with *Geneva* than with Ale and Beer, and that a poor Man can be drunk for a Half-penny.

7. That

7. And lastly, to clench it all, Let him prove that more People die of drinking *Geneva*, than die of the *Doctor*; not failing to tell to the World, where that formidable *Geneva* Shop stands, that has slain more Christians than himself.



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THE
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OF
FERMENTATION
EXPLAIN'D;
WITH THE
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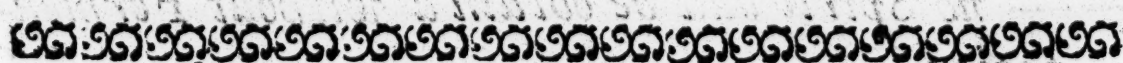
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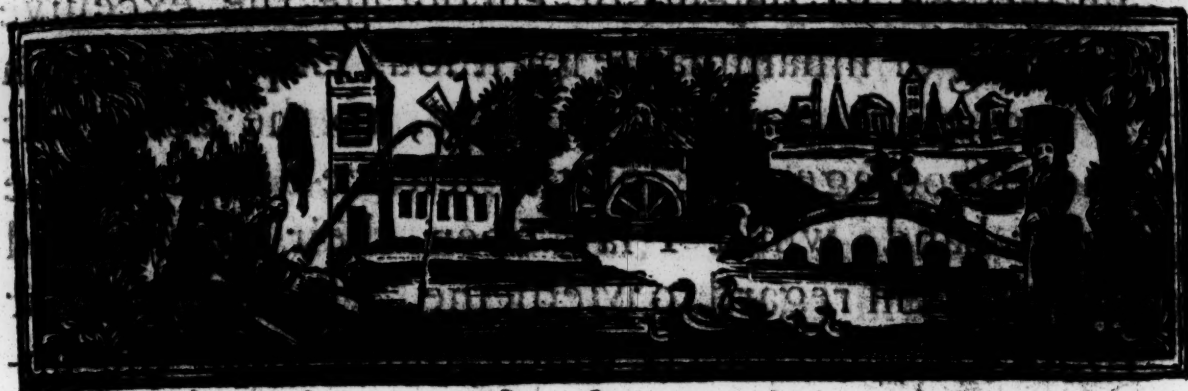


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THE



THE
NATURE
OF
FERMENTATION
EXPLAIN'D.



*Of the antiquity and usefulness of the
art of Distillation.*

BEFORE I attempt to explain the nature of Fermentation, which may be justly look'd upon as the very basis or groundwork of Distillation, 'tis necessary that I premise something by way of preface, concerning the antiquity and usefulness of this art; which by the intemperance and debauchery of some persons has been so reduced in its Credit of late, that it may seem to be
B draw-

drawing near its period. And here I shall not undertake to defend or encourage the excessive tippling of inflammable spirituous Liquors, which is too much in use at this day, to the detriment and discouragement of the science: But on the other hand, whilst I lay open their virtues and usefulness in regard to Medicine, I shall endeavour to shew the sad effects which follow upon the undue and immoderate use of 'em, when drank for pleasure.

As to the Invention of this art, it is by the general consent of all learned men ascribed to the *Arabian* Physicians, who considerably enriched the stock of Medicine with many useful discoveries, and amongst others introduc'd this also into the science. To this purpose writes *Heurnius*, a very learned author, who speaking of the antiquity of Distillation, hath these words: *Non nuper nata hæc præcellens ars: Nam Albucasis, Rhazes, & ejus auditor Abincennas, qui circa annum octogesimum supra millesimum à partu Virginis floruerunt, de hac tanquam jam receptâ & evulgatâ arte loquuntur, &c.* Our author here gives us an idea of its antiquity, by tracing it up to the 10th century, which was about the time of *Albucasis*, who liv'd much later than the two other authors, and therefore cannot share in the glory of the invention with them; the controversy lying chiefly betwixt *Rhazes* and *Avicenna*. Mr. *Le Clerc* fixes the epocha of it to the time of *Avicenna*; because in two several places of his works he mentions a *Rhodostagma* or Distill'd Rose-water. But the late learned Dr. *Friend* hath proved that the same ought rather to be attributed to the former, who very plainly describes the process of the *Ol. Benedictum, seu Philosophorum*, with all its proper Apparatus, and this long before the time of *Avicenna*, who was born near fifty years after the death of *Rhazes*; and

and therefore 'tis very probable he took the method from him. But be this as it will, in those early days the art was confined to very narrow limits, not extending beyond two or three processes at most, nor do we find the least mention of any Distill'd Cordial Water. For tho' Mr. *Patin* blames and condemns them as the first introducers of Cordial Waters into Medicine, 'tis certain that for near three hundred years afterward we meet with no such thing, not even in *Mesue* himself, who lived toward the close of the 12th century, and writ his *Antidotarium* or *Pharmacopæa* for the use of Apothecaries, in which he has collected most of the Medicines then in use.

Arnoldus de villa nova, an excellent Chymist, who flourished about the middle of the next century, is the first, I think, who in his *Breviarium Practicæ*, takes notice of some Distilled Spirituous Liquors; as *Aqua Mirabilis*, &c. *Gulielmus à Saliceto*, *Placentinus*, and *Thaddæus Florentinus* contemporaries, who lived about the same time with *Arnold*, amongst other compound Distilled Waters, make mention of that useful *Menstruum* the Spirit of Wine, (the first hint I think we have of it) though I am inclined to believe, that as the use of fermented Liquors was known long before the days of *Rhazes* and *Avicenna*, the way of obtaining an ardent or inflammable Spirit from 'em could not escape their knowledge; though perhaps for some private Reasons, the same was not presently divulged or made publick. However it was, it got footing soon after the *Arabian* doctrine arrived in *Europe*, which met with such a favourable reception among the learned, that from the eleventh to the close of the fifteenth Century, it was the only received doctrine of the schools; in which time this new branch of Pharmacy found its admirers, who began to cultivate

it with such success, that it immediately grew up to its state of maturity; for in a very short time afterwards we meet with a long train of authors, who wrote particularly upon this subject. Thus *John Michael Savanorola*, a *Paduan* physician of great esteem, published a treatise in praise of Distilled Cordial Waters, entitled, *De arte conficiendi Aquam Vitæ simplicem & compositam, deque ejus admirabili virtute ad conservandam sanitatem, &c.* in which he sets forth their uses and excellency, as well in the preservation as in the restoration of health. And herein he was followed by a great variety of authors, some of whose names I shall just mention for the reader's satisfaction, without being scrupulously exact as to the times wherein they lived. The chief of these were *Hieronimus Rubens, de Distillatione Liber, sive de Stillatitiorum Liqueurum, &c.* 2. *Adam Lonicerus, Histor. Naturalis, &c. quibus accessit de Stillatitiorum Liqueurum ratione, ejus artis & instrumentorum usu.* 3. *Bartholomæus Vogter, de morborum Curatione per Aquas Distillatas.* 4. *Claudius Deodatus, de vero & legitimo Aquæ Cordialis concinnandi modo & utendi ratione:* Not to mention *Andreas Libavius, Jo. Baptista Porta*, and several other learned physicians who have treated professedly hereof: Besides others who have written only some transient Pieces upon this subject, which are to be met with amongst their other works, and of which an infinite number might be collected. But these I think are sufficient to establish the reputation of the Art.

The excellency and usefulness of Distillation *Heurnius* thus elegantly sets forth in his *Meth. ad Praxin, Lib. III. Cap. 27.* in the following Words; *Et cum elegans illa Ars (viz. Distillatoria) hodie emicuerit, quæ liberare docet vires à mole corporeâ, succis, salibus ac oleis è terrestri mole abductis, ut ægri*

ægri remediorum cōmodo sine eorum fastidio fruantur, quantum fieri poterit, his utemur. And in another part of his Works he is no less profuse in its commendation; *Fatendum est, says he, Medicinam vix & ne vix dum Gratiis sacrificaturam, sine elegantissimâ hac distillandi Arte, quam non modo utilissimam existimo, quin potius necessariam; ut sine qua, ne vita quidem satis cōmode duci possit; cespitat jam profectò sine hac arte Medicina; hæc potentia ignis Liquores elicit ex Herbarum &c. omnibus partibus, qui Saporem, Odorem ac Vim gerunt earum partium unde dimanarunt.* The encomiums he here gives of this art, are very extraordinary, and he has confirmed the truth of 'em, by the usefulness and necessity of it in medicine, without which physick would be in a manner imperfect; as it teaches the method of separating the pure from the impure, and the more subtil and delicate parts of bodies, from the more gross and excrementitious. Upon which consideration *Ambr. Paræus*, a very experienced Surgeon, declared that medicines thus separated (*viz.* by Distillation) from their earthly impurities, were thereby render'd of a singular and almost divine efficacy in the cure of Diseases.

And thus much for the antiquity and usefulness of this art, and of the Cordial Distilled Waters, which are the product of it, so far as they relate to Medicine. Nor is it my design to extend the commendations of them farther; and under this restriction they will truly bear up their credit, by answering all the ends desired, and that is as much as can be expected from any remedies; for there's none of 'em, which if used preposterously, or indiscreetly, will not produce as many fatal consequences as the other, which of late have fallen under a publick *Oidium.*

Of Fermentation.

THE nature of Fermentation has been so much controverted amongst authors, who have endeavoured to explain it, that several learned men have rather chosen to pass it over in silence, than bring their reputation into dispute, by attempting to unfold the different appearances, arising in different subjects, or even so much as to declare what they really think it is; contenting themselves with shewing only the effects, without ever searching into the causes of it; and yet they all agree in this, that it is an intestine motion of the particles of mixed bodies, tending either to the perfection or manifest alteration of the subject; tho' they have differed so much concerning the primary cause, or principal agent which raises this commotion. To recite all the opinions that have been advanced upon this head, would be more tedious than instructive; and as our subject leads us only to the raising a vinous and spirituous Liquor from Vegetables, we shall exclude all the chymical effervescences, ebullitions, and other anomalous species of Fermentation as foreign to our present design. And here we are to consider, that all bodies fitted for this work, are such as have arrived at their utmost state of maturity and perfection; at which time the juices of vegetables having received their due exaltation from the preceding heat of the summer's Sun, which has rarified their contained fluids, and being by repeated and continual circulations still more and more attenuated, subtilized and broken, they at length undergo all the requisite digestions and comminutions in the vascular part of the Plant, whilst many of the more volatile and fragrant particles make their escape, and

and fly away; as appears from the odoriferous *Effluvia* which arise from the flowers of several aromatick Vegetables. And thus they are encompassed with a kind of atmosphere, made up of the most active and volatile elementary principles, originally lodged in them, and which seem chiefly to be of a salino-sulphureous nature; and probably are no other than the volatile Camphor of the Plant, which exhales insensibly from it, being drawn upwards by the heat of the ambient Air through its pores, or insensible *spiracula*. And this seems evident from the aforesaid natural composition, which we call Camphor, which readily moulders away into Air when exposed to it; though otherwise it may be kept a tolerable space of time, if well secured from it. And this white concreted matter is generally looked upon as the essential Oil of the Plant, from whence it flowed, enriched with a portion of fine volatile Salt. Betwixt which two principles there seems to be a great affinity; for some of the rich *Asiatic* Oils, when long kept, and duly preserved from the Air, have been observed at length to concrete into a kind of saline substance, as *Celsus*, *Homborg*, and the learned *Boerhave* inform us. And here it may not be amiss to observe, *first*, That as Camphor is the sole product of nature, arising from a conjunction of a fine thin ætherial Oil, and a volatile Salt; these very principles must have existed, and been inhærent in the subject during the time of its growth or vegetation: And *secondly*, that the same must necessarily have undergone a previous concoction (if not a Fermentation) before they could arrive at such an elaborate substance: And *thirdly*, considering the exceeding subtilty and inflammability of them, and their readiness to unite with Alcohol, or rectified Spirit, so as to form one homogeneous fluid (at least to a

ward appearance) when at the same time they will not mix with any of the other elements; it seems indisputable that they are of the same nature and quality (if not their main basis) with all inflammable spirituous Liquors obtained from Vegetables, by means of Fermentation. For I can by no means acquiesce in the opinion of some learned men, who have attributed it to an alkali and acid, mutually acting upon each other, that the said essential Oils are changed or converted into inflammable Spirits: For why should we introduce the notion of alkali and acid in this matter, when we see that the constituent principles of the subjects, by the assistance of a proper *Medium*, are capable to free themselves from their combinations, and exalt this Oil into a burning Spirit, by means of a due Fermentation; which otherwise could never (or at the least without great pains and difficulty) have been effected; as is evident from the Distillation of unfermented vegetable juices, whence nothing can be extracted, but an insipid phlegm and Oil. For instance, were you to distil the strongest Wort that could be drawn from Malt, or the richest Hydromel, without a previous Fermentation, you would obtain only a vapid phlegm, or an ill tasted Water, destitute of all distinguishable qualities of a vinous or spirituous Liquor, though at the same time replenished with the principles from which those inebriating substances have their being. From whence it appears, that the most elaborate and perfect vegetable juices, or the strongest decoctions of 'em, will not afford a spirituous fluid before they have felt the effects of Fermentation. And the same holds good in all other juices of this class, although never so pulpy, ripe and perfect. And this gives us a true notion of the composition of all artificial Wines
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and Brandies extracted from 'em, and the absolute necessity of fermenting Liquors for this purpose, as without it they could never be obtained.

The materials requisite for Fermentation are chiefly deduced from the subject, in which four elementary or constituent principles are most apparent (upon *Analysis*) viz. An Earth and Water (called phlegm) with a Salt and Oil; to which a fifth is generally added under the denomination of Spirit. But as this is of an ambiguous signification, I have rather chosen to omit it, and own my ignorance of it, than pretend to declare what that subtil *Æther* or seminal Spirit is, which is accounted the *Archæus*, or rector of the whole: Whatever it be, 'tis so small in quantity, and withal of so subtil and fugitive a nature, that very little thereof can be obtained by art. What resides in the Oil, doubtless we may procure, when the same becomes attenuated and rarified to a spirituous substance. For 'tis universally agreed that Spirit is nothing but the essential Oil, so broken and divided as to take upon it the forementioned form. These principles being so apparent in all bodies, I look upon them as the source of that fermentative action, which exalts the fluid from a state of crudity to that of the utmost perfection it is capable of. But as it hath been objected, that there are several (and even fluid) bodies, wherein most or all of the chymical principles have been found to lie *quiescent*, or as it were, at rest together, 'till by some accidental cause they have been actuated, or put in motion, and therefore they cannot themselves be accounted the principal instrument or first mover of 'em, if that old axiom holds good, *Nihil dat quod non habet*, we must then have recourse to some other assistance. And this only must be derived from
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the Air, for it hath not hitherto been sufficiently proved (by any experiments) that any body whatsoever is capable of rarefaction and condensation except the Air, a body, fluid, heavy and elastick, compressible it self, and able by its weight to compress others, subject to many alterations, in regard to place, climate, season of the year, time of the day and night, motion of the winds, &c. whereby its tone, or the measure of its rarity and density, suffers considerable and very often sudden changes; which depends in a great measure upon the fluxility and composition of its particles, which *Des Cartes* has compared to soft *floculi*, or down of feathers, *Cartes. Princip. Philosoph. Par. IV. pag. 138. Aer,* says he, *frigore facile densatur, & rarefit calore. Cum enim ejus particulæ fere omnes sunt fluxiles instan mollium plumularum, quò celerius aguntur, eò latius extendunt, & idcirco majorem spatii sphaeram ad motum suum requirunt, &c.* The Air then being a body so fluxile and variable, must needs have different effects according to its rarity or density, whereby its weight or pressure will be considerably augmented or diminished one time more than another, and consequently the surface of all bodies will be affected accordingly; but especially the fluid and mixed bodies will suffer most, as there is contained in them the greatest proportion or quantity of included Air, or *Æther*. And such are these bodies which particularly belong to our present subject, as Must, Wort, Honey'd-water, the fresh expressed juices of ripe Fruits, or Berries, and in general, all Liquors, or new Wash designed for Fermentation, in order to raise a vinous and spirituous Liquor from 'em. For these contain not only a greater quantity of a fine subtil Air or *Æther*, than other less compounded bodies do, as their specifick gravity and prone-

proneness to Fermentation plainly demonstrates, but likewise a mixture of heterogeneous principles or elements, which are put in motion by virtue of the aforesaid *Medium*; which pressing upon the fermentable mixed bodies, must necessarily put the constituent particles of 'em into vibrating motions; and the internal Air in the mean while, as likewise partaking of the same elastic quality, must consequently endeavour to expand it self; and hence will arise a greater commotion and collision of the contained principles, as by this means they must be continually driven and forced against one another, till at last their combinations being broken, the spirituous and lighter particles will endeavour to make their way toward the surface, whilst the grosser and heavier have their tendency downwards. And this confusion of the elementary particles is the reason why fermenting Liquors always appear turbid and thick; the pores of the watry vehicle or dissolvent being replete with the corpuscles of the other bodies, variously agitated and comminuted by means of the intestine motion, occasioning a fresh intercourse and occurrence of 'em, whereby the internal Air will be more rarified, and consequently endeavour to expand and dilate it self with the greater force, according to the gravity or weight of the incumbent Air, upon which the work of Fermentation does in a great measure depend. Thus we learn from experience, that in a cold or frosty season, Liquors will very difficultly ferment, unless kept near the fire, or in a very warm place, in order to unbend the spring of the included Air, which is in a manner locked up and imprisoned by the cold weather; at which time the incumbent atmosphere is also very much contracted, as may be seen by the Spirits in the Thermometer. Likewise in very hot sultry weather, when this element

element is very rare and thin, the contained principles of bodies, by the mediation of the internal Air, (expanding and dilating it self with great violence) are very much broken and subtiliz'd, and therefore apt to fly off at the surface; especially the more volatile and spirituous particles, leaving the residue a dead and vapid substance: Which accident is very common to Malt-liquors made in a sultry season, at which time they will scarce bear up the Yeast, or Froth at the top. And the reason is, the included air which acts by its elasticity, as the incumbent atmosphere doth by its gravity or weight, being then exceedingly rarify'd, forces its way to the top of the Liquor, where in a moderate degree of warmth it raises those vesicles on the surface which we call yeast or flowers, form'd of the thicker part of the Liquor; by whose viscidty it is detained as in so many little *Capsulae*, retaining likewise the spirituous *Effluvia* from passing off. But when by too great a degree of heat, as in the abovemention'd case, these little bladders or blisters are forced open by the too great dilatation of the Air, and the surface of the Liquor is left naked and destitute of its common covering; the Liquor must consequently hereupon become pall'd, ropy, and thick. To obviate which inconveniences the Brewers, when they design their Beer for long keeping, chuse the Spring and Autumn for this work, especially those two noted months *March* and *September*, (windy months of an unequal temper) at which time the work of Fermentation best succeeds; which may be attributed, not only to the moderate quality of the Air, but also to the variableness and sudden changes of it, in regard of its tone and temperature, which daily and even hourly changing, doth some time accelerate, retard, and then restore this intestine motion, according
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to the disposition of the *Medium*. How the same is effected by heat and cold, hath been already exemplify'd by the sinking or rising of the Spirits in the Weather-Glass, according as the heat or coldness contracts or expands the Air; and as the compound fluid is continually in motion, its frequent reciprocations, or access and recess to this or that degree of rarity and density, will have the same effect on fermenting fluids, and admit of the same considerations as before: Which needs no other proof than the Barometer, the former distinguishing the temperature as the latter doth the tone of it; and this is most conspicuous when the air is violently or strongly moved. As for instance, a brisk wind lessens the pressure of the incumbent atmosphere, at which time the Quick-silver sinks lowest in the Barometer, and then is the internal Air for want of its due pressure, exceedingly dilated and expanded; from whence a greater commotion and turgescency in the subject will arise, by which means the contain'd particles will be agitated more forcibly, and as it were kneaded together, the better to make them work, and rise in a ferment; which we daily see succeeds best in windy weather, when the motion of the Air is uncertain. At which time if the intervals of rest be any thing considerable, the Mercury will ascend and descend even the same day several times. Whence we may conclude that from these reciprocations or sudden fluxes and refluxes of this element, the elementary particles of bodies, especially such as are *in fluore*, and contain a due quantity of this *Aura* in their pores, must suffer considerably in their nature by the frequent and repeated concussions received herefrom: Whence there must of necessity ensue a collision or dashing together of the constituent principles. Some of which, as the 'fixed Salt, or
Tartar,

Tartar, (wherewith most fermentable Liquors abound) consisting of hard rough particles, colliding against each other, may, if the conflict be great, produce a heat (an inseparable concomitant to motion) and from thence a greater rarification; the consequence of which will be a total separation of the principles from each other, and consequently a change in the nature and quality of the fluid fermented. For, as it hath been before observed, the combination of the principles being in this intestine struggle entirely loosed from their mutual and strict band of unity, the essential Oil and Salt thus set at liberty from the earthy and fixed particles, will be attenuated, rarified and divided still more and more by the continual and frequent collisions of the harder bodies, till at last they have acquired their utmost degree of subtilty and fineness, so as to occupy or fill up the pores of the liquid *Menstruum*; (like as Salt or Loaf-sugar, &c. dissolved in common Water, lies therein inconspicuous to the eye, tho' at the same time perceptible to the taste.) And the same holds true here, for these very principles (I have been speaking of) are here wrought up to such a degree of fineness, as to swim imperceptibly in the fluid, and are that which imparts the vinous and spirituous taste thereto, the grosser elements subsiding and falling down to the bottom in form of Lees; whilst the aerial particles, which upon the account of their levity can't keep their former places, are carried up to the top in form of blisters, surrounded by the viscid parts of the Liquid forced up along with them, leaving the main body of the fluid *Menstruum* clear and limpid, of a vinous taste and flavour.

These things being premised in general, I shall, farther to confirm them, mention some few particular Instances, in which I shall deliver
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(by way of processes,) the usual methods of raising a vinous Liquor from vegetable productions, and from thence by Distillation an inflammable spirit. And these for brevity sake, I shall reduce under two general heads, (*viz.*) the juices, and seeds of vegetables; each of which requiring a different method or form of preparation, will be sufficient to give light to all the rest. The first I shall begin with, is that of vegetable juices; which by one or two examples familiarly laid down, will exhibit all that is requisite for this division; and as there is none more common and useful (especially in Medicine) than those spirituous Liquors, which are extracted from the juice of the Sugar-Cane, (*viz.* Molosses and Sugar) which are the basis of all compound Distill'd Waters (especially the better sort of them) I shall briefly shew the true Way of preparing that much admired Cordial Liquor, call'd Rum, as I have seen it practis'd in the *West-Indies*, which is after this manner.



PROCESS I.

Exhibiting the manner of distilling Low-Wines for Rum, after the method used in the West-Indies.



ILL a large Vat or Vessel near three Parts full of River-Water, to which add as much new Molosses, as will sweeten it like Beverage, or till it be so strong as it will bear up an Egg, (which will require about one third part of the latter) then
beat

beat them up very well together, till a froth begin to appear on the surface, and let the Liquor stand fermenting for the space of twelve or fourteen days, more or less, till it cease working; then skim it clean and put it into your Still, which must not be above two thirds full; lute close the junctures, and with a moderate fire draw off the Spirit till it begin to taste of the *Magma* or *Fæces*. This Liquor goes under the denomination of Low-Wines, which are to be kept in a wooden Vessel close stop'd or cover'd up for use.

This is the true method of distilling Low-Wines for Rum, as practised in the *West-Indies*, of which I have been an eye-witness several times. The Vat or Cistern, which is very capacious, wherein they usually ferment the Liquor, stands for the most part in an open Shed or Hovel exposed on all sides to the Air, which in those countries (as is well known) is very variable, as to calms and gusts of wind. The Trade-wind or Sea-breeze blows from Sea-ward all day long, especially from about ten a-clock in the morning, till toward the going down of the Sun in the evening. The Land-breeze, or that which blows from shore sets in pretty late at night, and continues till toward Sun-rising, later or sooner according to the season of the year: during which intervals or changes of the wind there is a profound calm night and morning. This I have purposely remark'd to shew, that these variations of the winds are the chief causes in promoting Fermentation in those countries, where they make use of no manner of Ferments. The reciprocal motions of the internal and external air are generally sufficient to forward the operation; only at some times, when it appears to be somewhat slow in working, they throw in a little, hot, clean Sea-sand into the fermenting Liquor, which immediately raises it in-

to a sort of effervescence, and sets it forward without any other help. The reason of which appears to be this, that the saline particles of the Sea-water, which adhere to the Sand, being dislodg'd, divide and break the cohesion of the sulphureous particles (with which the Sugar-canes abound) into smaller particles, by which means the internal Air, which is exceedingly rarify'd in these hot countries, finds an opportunity to get loose and expand it self; upon which all the contained particles in the fluid will be exceedingly agitated, and thereby attenuated, broken, and subtilized; the continual and alternate succussions of the internal and external Air greatly promoting the extricating of the spirituous and volatile particles from the more tenacious and grosser parts. The time of Fermentation requir'd there, being longer than is allowed in our climate, greatly contributes towards the exaltation of the principles and perfection of the subject, which is allowed to be a much finer product than what can be obtained here, tho' attempted with the same materials. And this doubtless in great measure farther arises from the newness and richness of the Molasses, which is drain'd from the new-made Sugar into large Cisterns placed on purpose to receive it, and chiefly consists of the sulphureous and oily particles (conjoined with a portion of the other principles) of the subject, which will not readily mix in a body with the rest, and turn into Sugar. And this is proved from the difficulty and time required in Fermentation to fit it for a vinous substance. For of all the elementary principles, the oily are the longest in changing their form, and the more they abound, the difficulter still it is to accomplish our design; and therefore several subjects which superabound herewith, can hardly or scarce at all by any means be brought to ferment. And, that this is

somewhat our case here, need not to be doubted, when we consider, that after all the tedious and long preparations required to perfect it, yet is the same evident and perceptible enough in that Spirit extracted from it, which we call Rum, the oilyness it leaves in the Glass (and which is look'd upon as a criterion of its goodness) confirming what we have advanced; which thing (amongst others hereafter to be mention'd) if duly consider'd, will be found to be one of the chief causes of that peculiar taste it bears, which is so different from what is produced in our own countrey; the changes which the Molosses undergoes in the several boilings and depurations for its refinement at the Sugar-houses, must indisputably exceedingly alter its taste and flavour, as Malt-spirits often rectified lose their disagreeable and nauseous taste, and become each time more pleasant and agreeable than before. And this holds true here, for that peculiar and desirable flavour which Rum affords, is partly deriv'd from the aforesaid causes, and partly owing to the Empyreuma deriv'd from the Still, as shall immediately be made manifest.



PROCESS



PROCESS II.

Shewing the method of distilling Low-Wines into a rectify'd Spirit, call'd Rum.

THE Low-Wines above describ'd having lain in a convenient Vessel close cover'd up, for about a month's space, 'till they begin to taste a little acid or sourish (at which time they are at their height, and if distill'd sooner, or suffer'd to lie longer, would lose in Spirits) are then to be committed to the Still, with one handful or two of common (or bay) Salt, to which some add a handful of Grains (in order to give a greater pungency to the Spirit.) The Junctures being well secured, you are with a slow and equal Fire (especially at the first) to draw off as long as the Spirit will fire or burn on the Still-head with a lighted Paper, and the Spirit so drawn off must be reserv'd in well-season'd Vessels for use.

These Low-Wines in the *West-Indies* are kept their due time in a square Vat or Cistern, made like a Pit wherein Tanners season their Leather in the Earth, whereto a Trap-door is exactly accommodated, so as totally to prohibit the entrance of the Air, and likewise the flying away of the internal Spirits contain'd in the Liquor. The reason I assign for their lying so long (as it were buried under ground) is that they may meliorate or ripen, the first process having not as yet wholly subdued the sulphureous or oily particles; and

thus they are suffer'd to rest, till the tartarous or saline parts are in like manner exalted, and so far blended with the former, as to become a volatile, sulphureous, saline, subacid Liquor. This is in a great measure proved by the example of all vinous Liquors, which are strong and rich in proportion to the quantity of Tartar they abound with, and the more they deposite or throw off of this essential Salt, the more oily and soft they become, and if committed to Distillation, would not yield near the quantity of inflammable Spirits they would have done before. Thus common experience testifies, that Rhenish Wine, which very much abounds with Tartar, will by Distillation afford more Brandy, than the Spanish sweet Wines will do. And hence we conceive, that the essential Salt of the Indian Cane in this space of time is become more subtil and volatilized, having absorbed in some measure the former, and would degenerate into an acetous substance as appears by the taste, if let alone; and therefore as soon as its tendency that way is discoverable, they immediately cast it into the Still, as a time most proper to obtain the greatest quantity of Spirits from it; for if suffer'd to rest longer, the acidity would wholly destroy the sulphureous and inflammable spirituous substance, and therefore would afford nothing of that kind; and on the other hand if committed sooner to Distillation, the essential salt not being sufficiently volatiliz'd, whereon the pungency doth in a great measure depend, it wou'd come over less piercing and fiery, and also in smaller Quantity. For to obtain a spirituous fluid in its due perfection, it is absolutely requisite that the essential Salt and Oil of the vegetable should be duly attenuated and volatilized, so as by Distillation to be reduced into one homogeneous, similar liquid substance, called Spirit. These things

things being premised in order to shew the usefulness and necessity of Low-Wines being suffered to lie till they acquire a tartish or sub-acid taste, I shall next proceed in my enquiries concerning the aforesaid peculiar flavour in Rum, which (how desirable soever it may be to some persons) may in a great measure (as I before observed) be attributed to the Still; for if you observe it carefully, it will be found no more than a common empyreumatick taste, or as we may say, a smatch of the burnt fæces: And this I am likewise confirm'd in by several reasons; the chief of which are, that as the Stills made use of for this work are exceeding large, and wholly committed to the care of the Negroes (and an overseer as idle as themselves,) they frequently want that due cleansing and washing out after every Process they ought to have; which here perhaps is neglected for a whole distilling season, and as nothing is more viscous and adhesive than Molosses, it cannot be expected but that a great quantity of the grosser matter must adhere to the sides and bottom of the Still, and consequently burn thereto; as 'tis common to all Stills, when not duly cleans'd, to have a cake of burnt fæces sticking to 'em. Another fault which may likewise produce this effect, is the charging their Stills with the Low-Wines, or Treacle-Wash, perhaps a day or two, but at least the night before they put Fire under for Distillation, during which time the Liquor (and more especially the Wash) hath leisure to deposite its grosser and heavier parts to the bottom and sides of the Still, which hardens as the Fire encreases, and consequently sends over with the Spirit the sulphureous or oily particles inherent in the burnt matter, which communicates that particular empyreumatical flavour to the distill'd Liquor. This I hold to be the principle and cause of the afore-

said taste and smell so peculiar to this subject. And if the like method was put in practice in our own countrey, I make no doubt but we should come very near to the original, if not exactly copy it; the effects arising from the newness of the Molosses only excepted; which if put into the balance, I am inclined to believe will be found light in comparison of the other. And therefore he that desires to obtain Rum, as near the genuine as this our climate will allow, must not stand too much upon Niceties, but must make use of the Negro's practice, and then he will have a fair chance of obtaining that particular taste, which arises from the adust (or burnt) oily exhalations commixing with the Spirits. But enough of this. He that desires farther Information, and how to obtain it at a much cheaper rate, than ever was heard of amongst us, I must for brevity sake, remit to the Island of *Barbadoes*, where he will be taught good husbandry, and a method of extracting this *West-Indian Cordial* at as low a price as his heart can wish. But this is best pass'd over in silence. I shall now proceed to the next thing that naturally falls under our consideration, which is that of Molosses Spirit; but as there is little difference in the way of preparation betwixt this and the former, being both raised from the same materials, I should have waved the description of it, as a subject belonging peculiarly to the Distiller's art, had I not lately met with a prescription amongst my writings, from which I once for curiosity (and instruction sake partly) made the experiment after this manner.



PROCESS III.

*Teaching how to extract a vinous and
spirituous Liquor from Molasses,
Sugar, &c.*

TO twelve gallons of Liquor (as Rain or River-water) boiled and suffer'd to stand, till it be just blood-warm; add twenty eight pound of Molasses, (*viz.* Treacle or coarse Sugar) beat them up very well together, for near half an hour, or till the Treacle &c. is all dissolved; then put in a sufficient quantity of new Ale-yeast; mix all well together, and cover the Liquor up close; and as it works up, beat it down again three or four times a day, till the Fermentation begin to cease or flatten; then commit it to Distillation after the same manner as is directed in the first process, filling your Still scarce above half full, and with a gentle Fire draw off your Low-wines, till they begin to taste a little sourish, shift your Still, and lay by your Low-wines in a Vessel close cover'd up for nine or ten days, or longer in Winter, till they acquire a tartish taste, and then you may proceed to the Distillation of the Proof-Spirit, which is to be managed in all respects as in the second process of distilling Low-wines for Rum, only observing not to draw it below proof, as being a good commodity, which will enrich it self by keeping; and here it may not be amiss to add one or two pounds of Raisin Stalks, with a handful of Bay-salt to the second Distillation, which will keep down the

phlegm, and consequently make the Spirit rise in larger quantity, and be better tasted, and capable of great improvements by art.

Note, that if it should work slowly thro' the viscosity or clamminess of the fermenting Liquor, or coldness of the season, a few live Coals or new-made Wood-ashes will remedy that inconvenience, by dissolving the oleaginous particles, and separating them asunder, the alkaline Salt in the Ashes being excellently adapted for this purpose. The same effect will be produc'd by an Onion dipp'd in strong Mustard, or a Ball made of quick Lime, Wheat Flower, and the White of an Egg beat up into a Paste, a piece of which being thrown in will occasion a new Fermentation: But these last are only to be used, when you are sure this defect proceeds solely from the thickness of the liquor, for otherwise these volatile and fiery saline substances will so break and divide the texture of the fluid, that with themselves they will make way for all the contained spirituous particles to fly off at the surface, as is sufficiently evident from experiments of a like nature. Thus Scurvy-grass, Horse-radish root, &c. which abound with a very pungent volatile Salt, when put into fermenting Liquors, tho' rais'd to the highest head, the flowers will immediately cause them to subside and from thenceforth cease working. For the volatile saline particles, continually exhaling from 'em, in their passage upwards will burst asunder the aerial vesicles, or blisters, which swim upon the top of the Liquor; whereupon a subsidence and flattening of the Liquor must of necessity ensue: And therefore where your subject is poor and thin, these attenuating subtil bodies are by no means to be made use of; but on the other hand you are to add more Molasses, Sugar, &c. with a portion of good Ale-yeast to give it a greater body.

body. The lees of Ale will also enrich it and thereby promote its Fermentation: But when it is too much replenish'd with vegetable juices, those sharp stimulating compositions may be advantageously made use of. Farther, when the Liquor is of a thin substance, and abounds with many subtil and very fugitive particles, something of a viscid and gross consistence must be used to bridle and restrain their too great activity; to which end the White of an Egg and Wheat-flower, old Yeast and a cool position, are very serviceable. What I have here laid down I hope will be excused, as it teaches all that is requisite to be known for promoting the business of Fermentation, the knowledge of which is absolutely necessary for the right treatment of all vegetable subjects that fall under this consideration.

Here usually arises a controversy, whether the Barm or Flowers are to be put into the Still with the Fermenting Wash. Several Practitioners plead strongly for it, and others as strenuously against it. The former urge its fermentative quality, and that a large proportion of subtil spirituous particles are contained in it, and consequently that from thence a portion of inflammable Spirit may be procured, and therefore advise to throw all into the Still together when the Liquor is in its highest curl, and proceed forthwith to Distillation. The latter observe, that whilst it ferments and swells in the Still (when urged by the heat of the Fire) it very often boils up into the head, and thereby endangers its blowing up, (unless kept down by a great weight,) by which means great damage must arise; or at least that it comes over foul into the Worm, and thereby spoils the clean Distill'd Spirits; and therefore they reject it as useless, or at least not worth the trouble and peril it may occasion; and thus they skim

skim clean their Backs, before the Yeast falls down to the bottom. But these reasonings may easily be reconciled; for if, when the Fermentation is pretty far advanced, and the Flowers begin spontaneously to subside, the Liquor should then be suffer'd to stand in the Back, or other Vessel close cover'd up, till it become of a subacid taste, or a medium between sweet and soure, (at which time it may be said to have imbibed or fed upon its own Lees,) and then be committed to Distillation (the Still being half fill'd therewith) it would afford far more Spirit than if used either of the foremention'd ways. And this may be proved by the common experiment of distilling the Lees of Ale, Beer, or Wine, by the good Women, who without any preparation distill off a tolerable and well tasted Spirit from them; which in my opinion might be done to far greater advantage, if the same were first dissolved or diluted with a sufficient quantity of warm Water, and then with common Ferment set a working for some days. For this process might probably afford a Spirit in greater quantity, as it loosens the texture of the fæces, which I look upon as too compact and viscid to yield all their volatile and spirituous parts, without undergoing this previous preparation. But this I refer to every one's judgment and discretion, which will best direct him after due proof made hereof; for I cannot suppose that it will ever be comply'd with by the wholesale Distillers, whose ready vent for their Goods will not allow them such a space of time as is proposed for the Liquor to become of a tartish taste, and therefore they are obliged immediately after Fermentation to commit the Wash to the Still (the Backs working all the while;) but for those who have not so ready a demand, or only make it for their own use, I am persuaded, they will find their account

account in following the proposed method. To conclude, I have often wonder'd at the practice of fermenting all Molosses and Malt-wash, without any previous boiling; whether the length of time requir'd to boil 'em, and greater apparatus of Vessels, or the fear of the exhalation and waste of Spirits has occasion'd it, I cannot tell. As to the first, there may be an appearance of reason in it; but for the latter, it is certain that the Liquor can lose none of its best parts by boiling (before Fermentation) for it is that alone which sets loose its active particles, and before that hath been premised, were it to be boiled never so long, not the smallest portion of Spirits would be lost by it. As for Example, fill a Still half full of the best and strongest Wort that can be brew'd from Malt, or Wash drawn from Molosses, boil them in the Still (unfermented) with the head on, and you shall find that what descends thro' the Worm, will be only an insipid phlegm, destitute of all the distinguishing qualities of an inflammable Spirit; and this makes good the positions which I have advanc'd. Therefore I should advise all those who have opportunity and conveniency of utensils, especially Apothecaries and others, who would make any quantity for their own use, to boil up their Wort to a due consistence, as the Brewers do their Beer and Ale, by which means it will become stronger and of a better body, and being suffer'd to cool, it may be put into a proper Vessel with a due quantity of Ale-yeast, and there suffer'd to ferment, beating it in as it rises up, till it cease of its own accord; and it will hereby yield more Spirits than if unboil'd, or not duly fermented; from which last circumstance, the nauseous and disagreeable flavour so often perceptible in common Malt-spirits frequently arises.

PROCESS IV.

Delivering the method of preparing the Wash for Low-wines, and drawing from thence an inflammable Spirit, extracted from Grain or Corn malted.



UPON a quarter of ground Malt (more or less, according to the size and magnitude of your Wash-backs) pour as much scalding hot Rain-water or River-water (the Malt being first put into your Mash-vat or Tub) as will well wash it, or make it of a consistence like to a thin pap; stir it very well together, till all the Malt be thoroughly wet and mix'd with the hot Water, then cover it close up (some farther sprinkle the top of the Mash over with dry Malt ground;) let it stand two full hours, or somewhat longer, that the Liquor may be fully saturated and impregnated with the powers or principles of the Grain or Malt, then let it run off from the husks; and if there be any virtue or strength left, which may be perceived by the sweetness of the Grains, pour on more hot Water, and let it stand in infusion as before, till it be fit to be drawn off; then mixing the Wort together, put'em into the Mash-backs to ferment with a due portion of Ale-yeast, and let'em stand there two or three days, keeping the Liquor down from working over the Backs, by often beating it in; and then use your pleasure either to skim off the Barm, or let it go with the Wash into the Still; fill half your Still with it (observing to keep the
Back

Back working all the while) lute close the junctures, and with a moderate and equal Fire at the first, draw off two or three Canns, which will be very spirituous, and then proceed with a somewhat stronger Fire to draw off the rest. These Low-wines must, like the foregoing, be kept in a Vessel close covered for nine or ten days, and then may be drawn off over again, till what comes over ceases to take fire from a lighted Paper. If you would have them rectified full-proof Spirits, you must draw over a third time with the addition of Raisin-stalks and a little Bay-salt, Salt of Tartar or Flemish Pot-ashes thrown into the Still; as is taught at large in the first part of this book. If your Wash was well fermented, you might procure from the aforesaid quantity of Malt about three Barrels of Wash, the product of which in Low-wines would amount to near thirty seven or thirty eight gallons, and from thence would yield about fourteen gallons, or rather more, of proof Spirits. The remarks which here occur are so near akin to the foregoing, that what has been said already upon this head, may very well suffice for this Place. I shall only observe (in answer to * some Queries sent me) that the opening the body of any Grain, as Barley, Wheat, Beans, Rape, &c. is perform'd by the Maltster's art,

* The following Queries were sent to me by some Person unknown. "How to open the Body of any Grain, as Malt, Rape, Molasses, coarse Sugar, &c. What quantity of Water is put to a quantity of any of the aforesaid, and how long time they will take to ferment? And as several things are used to forward Fermentation, what is proper beside Yeast, and in what Proportion to be used? As likewise, what quantity of Spirit in the first Distillation such a quantity of fermented Liquor will yield? This being the ground-work of all Distillation, if it is fully explain'd in the next edition, that Work will then better claim the title of a compleat Body of Distilling.

who as the learned Dr. *Willis* informs us, first steeps those vegetable products in river, or common, Water for three days, until it be render'd soft and tumid, then the Water is to be drained off, and the Barley to be removed from its wet Couch to a dry Floor, where it is laid upon a heap, stirring it twice or thrice a day, least it should grow too hot. In this state it is kept till it begin to bud or sprout; afterward its further growth is prevented by throwing the Couch abroad into shallower Beds, frequently turning and spreading it thin over the surface of a large floor, in order to dry it thoroughly, and consume all the superfluous moisture; lastly, the process is finished by drying it and crisping it on the Kiln by the help of the Fire, which being ground, yields a wonderful sweet Meal or Malt.

Thus our Author shews us the process of opening the body of any Grain or Pulse; which is built upon the following reasons: *First*, the Barley is steep'd in Water, in order to plump it, and rouse up the active principles, or vegetative spirit of the Seed. *Secondly*, it is thrown into moderate heaps or couches, that by the heat or warmth thence arising (as 'tis common to all moist bodies, when accumulated, to acquire a putrefactive heat) the foresaid elementary principles may dilate and expand themselves: And like as the internal *Aura* of mixt bodies, when rarify'd by heat, seeks for a passage thro' the pores to extricate itself; even so here, those active little bodies thus put in motion force open their containing *Capsulae*, and begin to shew themselves in form of a bud or sprout; but lest they should exhale away or fly off from the subject, a Stop is put thereto, by drying and hardening it, first upon a large open Floor expos'd to the Air and Wind, and lastly, by the additional heat of the Kiln; all which is intended wholly to

to consume the moisture, which gave birth to the vegetating or germinating faculty; and hereby a stop is put to their further growth or action, until they come to be wet again in the Mash-vat, and by means of Fermentation are exalted to their utmost state of perfection or volatility; by which means we obtain a very grateful and pleasant vinous Liquor.

The first Query being thus answer'd, the rest are easily accounted for. I shall therefore proceed to shew next in what manner to prepare some compound Cordial Waters, and go on to lay down the method of making some artificial Wines; which shall finish this undertaking.

Aqua vite.

TAKE Cubebs, Cinamon, Galangal, Nutmegs, Cloves, Ginger, of each three ounces; Sage, one pound and two ounces; macerate all these in six gallons of Proof-spirit; to which add a sufficient quantity of Water, and draw off with a gentle Fire, till you see the Faints appear: Dulcify with a sufficient quantity of Loaf-Sugar, according as your palate and judgment shall direct you.

The original prescription, which we have from *Gesner* and *Rantzovius*, orders only as much Spirit as the weight of all the ingredients amounts to, which will scarce be sufficient to moisten them. And therefore I have altered it to six gallons, which is as little as can be used for thirty six ounces of ingredients. This Cordial Water was in great esteem (as the aforefaid Authors inform us) with *M. Gallus* Physician to the Emperor *Charles* the Fifth. By the use of which he is reported to have lived one hundred and twenty four years,

years, saith *Gesner*, and one hundred and twenty nine according to *Rantsovius*. Whether either of them be in the right is not material; their joint consent as to its virtues is sufficient to establish a good opinion of it; the latter dignify'd it with the pompous title of *Aqua vitæ*, *Vitam prolongans*, upon the account of its efficacy in prolonging the life of the aforesaid Emperor's Physician, which taken as a Cordial very probably might contribute to invigorate and rouse his spirits, when the spark of life begun to fail, and the circulation of the juices grew languid; a dram of this Cordial Water taken in any convenient vehicle, would in this case immediately restore the depressed state of the spirits, and recruit all the animal functions as it were in a moment; the aromack *Effluvia* arising from the rich essential Oils of the ingredients (wherewith they very much abound) when received into the body, will immediately insinuate themselves, not only into the more open passages, but likewise even into the inmost recesses of the nerves, where by virtue of their attenuating and stimulating faculty, they will rarifie and dissolve any viscid or gross matter, which might infarctate or obstruct their minute pores or passages, and further, at the same time, irritate the fibres to throw off the adhering lentor which might load or oppress them; and by thus opening a passage for the nervous fluids, and likewise bracing up the *fibrillæ* of the solids, they may truly be said to rouse the spirits, and impart a brisk motion to those subtil bodies; from whence must consequently arise a proportionate vivacity of mind, as well as activity and agility of body; especially in all cases arising from a cold cause or decay of the natural heat. But in a contrary habit they will have as contrary an effect, by adding oil to the flame, which is ready to burst out to the destruction

struction of the whole animal oeconomy. This Water may be used in all cases (and with as good success) as the *Aqua Mirabilis*, or Dr. Stephens's of the Shops. 'Tis as pleasant to the palate, and as serviceable in Medicine, being a very good cephalick and stomachick Cordial Liquor; and seems to me to have given rise to the other two.

Another.

TAKE of the best Cinnamon one ounce and an half, white Ginger three drachms, Cloves and Nutmegs of each half a drachm, grains of Paradise two scruples, black Pepper one scruple, powder them grossly, and infuse them for six days in one gallon of Proof Spirits, then put them into your Still with a sufficient Quantity of River-Water, lute well the Junctures, and with a moderate Fire draw off for use.

This Compound Cordial Water is likewise made by infusing the aforesaid Ingredients in a sufficient quantity of *French Brandy*, which may be aromatized (for those who can bear Perfumes) with a little Musk and Ambergreese tied up in a Rag, and suspended in the Bottle; and edulcorated with Loaf-Sugar, or Syrup of Citrons, as *Lucas Gbinus* orders in his prescription; or with the *Julapium Rosatum* according to *Heurnius*, who gives us an elegant description of its virtues and excellency in the preservation of health and prolongation of Life, from *Jo. Michael Savanarola*, an excellent *Paduan* Physician, who relates that *Antonius de Scarperia*, a Physician of great note, with *Jacobus Parmensis*, another of the same faculty and a Nobleman of *Mantua*, with the aforesaid *M. Galus* and some others, supposed their lives to be prolonged by the salutary effects of this Cordial Water, moderately taken in their old age; to which *Hieronimus Rubeus*, a learned Physician,

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gives

gives his Assent. The particular virtues of it we have from the above-mention'd authors, who tell us, that it resists putrefaction, promotes concoction, and recreates the Vital Spirits with an unusual Vivacity, that it comforts the Head and Brain, by stirring up the natural heat to strengthen the memory, and preserve the mechanism from sinking under an apoplexy, as *Lucas Ghinus* well observes, in the Enumeration of the virtues of his *Aqua Vitæ Aurea*; the description of which may perhaps not prove altogether unacceptable to some persons, and is as follows.

Aq. Vitæ Aurea.

℞ Cinnam. Elect. ʒx. Lign. Aloes ʒv. Cardamom. Cubeb. Caryophyl. ana ʒiiij. Galang. ʒiii. Santal. Citrin. ʒiiij. Flor. Rosar. Rubr. Siecat. ʒiiij. Nuc. Mosch. Macis ana ʒβ. (Mosch. ʒi. Ambergr. gr. 40) Aq. Vitæ Simpl. ℥xii. Syr. Cort. Citr. Miv. Cydon. ana ℥i. Pulveriz. & misceantur in vitro optime obturato, agitando quotidie bis terve, & cum per mensem sic steterint, coletur & servetur ad usum.

There can be no Fault found with this composition, except its dearness, which is much increased by the perfumes; and these may very well be omitted for some constitutions, the residue of the ingredients being sufficient to aromatize it with a grateful flavour. The virtues our author assigns to it, are much the same with the foregoing, and as he concludes, 'tis an excellent remedy against all cold diseases; but in hot and bilious temperaments, and all inflammatory or febrile disorders, where the circulation is præternaturally augmented by some accidental cause, or to persons subject thereto upon any slight and trivial occasion, as most young persons are, the use of these hot Liquors is wholly to be forbidden. For
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it deserves to be observed, that the aforesaid Physicians, &c. who used this Liquor with so much benefit to their healths, only begun the use of it about the 80th or 90th year of their age, when the animal faculties begun to flag, and nature crav'd the assistance of some generous Cordial, to rouse up the Spirits and disperse the Crudities which might oppress them: To which intention, these compositions seem to be excellently adapted, if taken in Wine or diluted with any other convenient vehicle, which was the method used by their authors or composers. *Heurnius* is very sparing in the dose, allowing only a few drops to be taken in a glass of Wine, which makes it as good as *Hypocras*, and that with far less labour, and expence of time, than is required for the composition of that once celebrated medicinal Wine; a prescription for the making of which I shall borrow from *Conrad Gesner*, an author of great credit, who in his *Euonymus* delivers us this Process.

Hypocras, or Hypocratic Wine.

TAKE Cinnamon one ounce, Cloves one drachm and an half, Anniseed and Fennel seed, of each one drachm; Liquorish three drachms; Mace, Cardamoms and Orrice-root, each half a drachm; Loaf-Sugar three ounces; bruise the Spices and Seeds in a Mortar, and slice the Liquorish, and pour upon 'em nine ounces of Malmsey (or strong Mountain white Wine) and a pint of Borrage-Water, three ounces of Balm-Water, and one ounce and a half of Rose-Water. Infuse them in a Matrafs (or other convenient Vessel) in a moderate heat for three hours, then run the Liquor through the flannel Slieve, or filter-Paper for use.

'Tis very profitable for diseases of the Lungs and Thorax, as faith our Author. We meet with another prescription of the said author's, wholly made with Wine, and therefore perhaps may be more acceptable. Which is thus:

℞ Cinnamon one ounce, Ginger half an ounce, Galangals and grains of Paradise each two drachms, Cloves one drachm, double refined Sugar half a pound, best Wine as much as is sufficient, and with a due portion of Almond-Milk, clarify and strain it through a thick Flannel until it be fine, and then bottle it for use. This hint I find is taken notice of by others, who in the composition of this Wine, add a portion of new Milk to it in lieu of the *Lac Amygdalarum Dulc.* prescribed by our author, with the juice of a Lemon, in order to depurate it or fine it sooner. By which artifice *Hypocras* becomes much mellowed and better tasted. It is a pleasant Cordial very grateful to the Stomach, strengthening its relaxed tone, and bracing up the fibres to their due and natural tensity, when vitiated by surfeits or debauches; and may be much better trusted to, in several cases, than the heating stomachick Tinctures infused in Brandy, used in Coffee-houses &c. upon the like occasions.

An Alexipharmick Cinnamon-water.

TAKE Cinnamon one pound, Citron-peel four ounces, tops of Balm one handful, Angelica-seed half an ounce, Proof-spirits three gallons, River-water two gallons, mix and distil according to art.

This is a pleasant compound Cinnamon-water, which may either be dulcified with double refined Loaf-Sugar, dissolved in a sufficient quantity of
Rose-

Rose-water, when you put up the goods into your Cask, or only *pro re nata*, as occasion calls for it. Its aromattick flavour wonderfully recommends it to the sensitive organs, cherishing and restoring the decays of nature, when suffering under the burthen of old age, chronical distempers, grief or trouble of mind, or any other calamity of the like nature; and in my opinion is equal, if not preferable to that small Cinnamon-water of *Matthiolus* (drawn from Cretan-wine and Rose-water, each four pound to one pound of Cinnamon) which he loads with such commendations; and with him we may say, that it corroborates all the principal Viscera, as the Heart, Brain, Stomach, Spleen, Liver, Lungs, and Nerves themselves, thereby strengthening all the animal functions, and may very well be allowed to merit the appellation of an Alexipharmick, if what our ancient and well experienced Botanist (*Gerrard*) saith of the Citron be true, whose credit I shall not call in question.

Our Compound Poppy-water.

TAKE of Proof-spirits two gallons, red Poppies as many as the Spirits will well contain, or thoroughly moisten: Set them in a glass body placed in the Sun for two or three days, then add thereto Raisins sliced half a pound, Liquorish and Figs cut in pieces of each four ounces, Cardamoms, Cubebs, Coriander-seed each two drachms, Nutmegs and Mace each one drachm, bruise the Spices, and put them into your Still with one gallon and a half of common Water, lute the junctures, and with a gentle Fire distill off your Goods till the faints appear, put your Distill'd Liquor into a wide-mouth'd Glass Vessel, to which

add fresh red Poppy-flowers four handfuls, Cinnamon two drachms, Nutmegs and Mace of each one drachm, Citron-peel half an ounce, white Sugar one pound, dissolved in one quart of Rose-water, let them infuse for two or three days more, then strain off the Liquor and run it through your Filter, or flannel Bag for use.

This is a very beautiful and well tasted medicinal Water, serviceable upon many occasions; the Liquorish and Figs, although mucilaginous bodies, and as such may seem very unlikely to send over any remarkable virtue in Distillation, do yet impart a softness and smoothness to the distill'd Liquor, as experience sufficiently testifies; for those Liquors, into which such bodies enter, do always taste milder upon the palate than others wherein they are wanting; upon which account it hath been usual to add them to Citron-water and other rich Cordial Drams, to obtund the acrimony and heat of the new distilled Goods, whereby they meliorate sooner, and acquire a rich flavour. And upon this view, (not being unapprized of these objections) I chose to commit them to Distillation, in order to temperate the fiery heat of the Water, and render it fitter for internal use: The Poppies (wherein the chief medicinal qualities of the compound consist) recommend its use in several diseases of the Chest or Thorax (if discreetly given) and is the only Cordial Water wherein an anodyne quality presides. The excellent specifick property of that vegetable in inflammations of the Pleura and Lungs, hath introduced its use in all pleuritical disorders, as likewise in other inflammatory cases; for as *Etmuller* well observes, it wonderfully dissolves the grumous blood, and therefore in his comment upon *Schroder*, he advises the use of these Flowers in a Pleurisy, Quinsy, Erysipelas, &c. as do several

veral other able practitioners. But as acute and fatal distempers do not admit of time to be trifled away upon fruitless experiments; far be it from me to recommend the use of spirituous Cordial Liquors in such cases, and especially in the hands or direction of those who are not duly qualified for the business. I shall rather exhort them to desist and give way to others, whose judgments and qualifications will be their sufficient warrant, and in whose hands it may be found of service both as an anodyne and as a dissolvent, when diluted with some proper Vehicle, such as the Simple Distill'd Water of red Poppy-flowers, &c. whose efficacy in composing rest without inducing any bad symptoms, hath been often experimented to transcend all the famed Opiats of the Shops: But enough of this. Its other virtues are, that as a Cordial Dram it corrects the crudities and laxities of the ventricle by virtue of the warm Spices contain'd in it, and consequently promotes digestion; from whence it hath taken the denomination of a Surfeit-water, a title which some have given it from its salutary effects; and in a word it cheers the drooping spirits, invigorates the whole system for a season, and afterwards induces a pleasant and quiet sleep, acting the part of a good Cordial, without leaving any harm behind it.

Claret or Nectar.

TAKE of Cinnamon six drachms, white Ginger half an ounce, Cloves three drachms, Nutmegs two drachms, Mace and Cardamoms of each half a drachm, Coriander-feed a drachm and a half, white Sugar one pound, best Wine four pints, mix them all well together, and let them stand in a convenient Vessel close covered up for

two days. Then press out all the Liquor from the Ingredients, and by often running it through the Flannel-bag, fine it to a beautiful transparent colour; and if you would have it very rich, a little Musk and Lignum-aloes rasped, and hung in the Vessel (tied up in a nodule of scarlet Silk) will aromatize it with a very rich and delicious flavour, and for beauty's sake a few leaves of Gold may be lightly broke in it.

This prescription I have selected from *Gesner*, as being the most simple and best adapted composition I could meet with, amongst the great variety that learned author hath produced in his book of secret remedies: Some of which are prepared with Honey in lieu of Sugar, and clarified with the White of an Egg (for vulgar persons) which I have rejected, upon the account of the taste, and also of the colour, which are render'd more disagreeable hereby. This medicated Wine, which our author dignifies with the pompous title of Nectar, is somewhat akin to the *Vinum Hypocraticum* aforegoing, but somewhat more warming and stomachick, as its composition plainly denotes; it corrects all crudities and disorders of the first passages, discusses flatus's and eructations of Wind, and by invigorating the fibres with a fresh supply of Spirits, and the grateful sensation communicated to the whole nervous system, all languor or faintness is instantaneously removed; the nervous fibrillæ having recovered their tone are enabled to shake off whatsoever is oppressive and offensive to them. Hence proceeds that cheerfulness of mind and agility of body, which usually is so perceptible after a moderate dose of any cordial or spirituous Liquor; whose effects are so immediate and quick, that we cannot suppose the same to have run the long course of circulation with the chyle and blood, and therewith to have under-

undergone the several transmutations and secretions requisite for the perfection of such a noble fluid as the animal spirits are; but rather that they take a much shorter course, as by the very nerves themselves, or their fibrillæ, through whose minute orifices very probably they are imbibed or sucked in, which being replete herewith, they perform more forcibly their usual vibrations or undulatory motions (stimulated hereto by the volatile particles of the ingredients) to discharge and throw off any pituitous or viscid Lympha, which might obstruct, adhere to, or otherways oppress them. And hence, in faintings, swoonings and other dangerous and sudden prostration of the forces, arising from what cause soever, Cordial medicaments of a Liquid form, are always most eligible and preferable to those of a more solid and compact substance.

Spirit of Clary.

TAKE Leaves of fresh Clary gathered in its prime three or four pound; bruise it or cut it small, then put it into a wooden Vessel with as much warm Water as will just cover it, let it stand for three or four days, then commit it to the Still, and with a due degree of heat, bring off all the Water as long as it hath any taste of the subject. Then knock off your Still-head, and press out the Liquor which remains in the copper body, and with the Distill'd Water pour it upon a like quantity of fresh Clary bruised as before: Then (having clean'd your Alembick from the remains of the aforesaid distill'd plant) put them altogether into the Still (or any other suitable Vessel) and let them infuse for four or five days longer, in order to extract the whole virtue of the plant,

plant; which being perfected, add thereto one gallon of rectified Proof-spirits, lute close the junctures of the head, and refrigeratory, and with a moderate and equal Fire draw off all the clean Proof-spirits, reserving the faints or after-runnings apart, for another Distillation.

By this method of infusing the plant a sufficient time in warm Water, the texture of it is loosen'd, and its body prepared to emit its principles in Distillation. But that we may obtain all its qualities in greater perfection; the Distill'd Water, and Liquor left in the bottom of the Still, are affused (in lieu of common Water) upon fresh Clary, and committed likewise to a second digestion. By which cohobation and reiterated infusion, the Liquor becomes wholly saturated with the principles of the vegetable; which if then distill'd without any spirituous substance (to imbibe the oily particles) would come over thick and unctuous, as being not sufficiently broken and subtiliz'd by a previous Fermentation; to obviate which inconveniency, we add a due quantity of Spirit of Wine, in order to attract or suck up the Oil (wherewith it readily unites and commixes) and carries it over the helm in form of Spirit, enriched with all the essential principles of the ingredient or vegetable, as much as if it had suffer'd a Fermentation; which, seeing that this Spirit partakes of many singular and even uncommon virtues, in altering the taste and flavour of many fermented Liquors, to a far richer and more noble nature, as hereafter shall be shewn, I shall exhibit one process more of preparing this Spirit by means of Fermentation, leaving the Artist to take his choice of that which pleases him best.

Spirit of Clary by Fermentation.

TAKE what quantity you please of fresh Clary gather'd in its full prime, bruise it well, or cut it into small pieces, and put it into a wooden Vessel (placed near the Fire) then pour upon it about twelve times its own quantity of River-water made warm, with a sufficient quantity of Sugar, (*viz.* about two pound to every gallon of Liquor) stir 'em all very well together, then cover up the Vessel, and let it stand pretty warm: If the Fermentation proceed well, which may be known by the continual hissing noise of the Liquor, with a froth thrown up with the plant to the surface, you need do no more till the same be wholly compleated, which will be sooner or later according to the season of the year, and heat of the weather (which hath a particular influence in this case;) as for instance if it advanced pretty soon and kept well up, a week or ten days may be sufficient; but if otherwise a longer time is required, and it will be requisite to add a portion of Ale-yeast to promote it (and a little more Sugar if need require) placing it nearer the Fire if the Liquor feel cold: When it hath stood its due time and the Fermentation is fully compleated, and the plant subsides to the bottom, you are to commit this vinous Liquor to the Still, half filling the same herewith and proceeding in all respects as before directed, drawing off the Liquor as long as you can perceive any taste of the Spirit, and that it remains clear, and free from an Empyreuma or other disagreeable flavour (if the first runnings appear clean, limpid and very spirituous, reserve them apart for your use.) But it is seldom that the Fermentation is so perfect

fect and compleat, as to afford any quantity this way, that is fit for keeping any time; and therefore it will be absolutely necessary to rectifie it over again, after your Liquor hath laid some time to enrich it self according to the method laid down in distilling low Wines; during which interval there is cause to fear, that some of the most distinguishing principles (wherein the specifick taste and smell of the plant resides) will be either lost, or at least so changed in their nature, as scarce to be discoverable from any other spirituous body, to the entire destruction of the nature of the subject. To avoid which Inconvenience I would advise, that when the Fermentation is at the height, (which must not be continued too long if this be used) to add a due portion of Spirit of Wine, or *French Brandy*, to the fermented Liquor, and then immediately to charge your Still with it, and lute it well, and with a moderate flow fire draw off the Spirit for use; which by this method will yield a larger quantity, and retain the true taste and flavour of the vegetable, from which it was extracted; tho' whether in that perfection with the preceding Process may be questioned, and experience by frequent trials must alone discover: For 'tis an undoubted truth, that the many changes which vegetable subjects undergo in Fermentation, do so alter the nature and form of the constituent principles, that very much of the genuine flavour and taste of the subject is lost thereby. Which inconveniency can only be remedied by the proposed method, which seems most likely to retain those volatile distinguishing *Effluvia* we so much desire in this composition.

Another way yet more simple and expeditious remains, which is this.

Take

Take the leaves of Clary fresh gathered, cut small or bruised, two pound (more or less according to your use) Spirit of Wine six pound, distill in a Glass-Still to dryness. Pour this distilled Spirit upon the like quantity of fresh Clary, which infuse for a night in the Still, then with a gentle fire repeat the operation as before, taking special care to avoid an *Empyreuma*. The Spirit thus obtained brings over with it all that is desirous in the subjects, and is a pleasant and fine Cordial, of a very agreeable and Citron-like flavour. *Etmuller* highly recommends it in feminine cases, as particularly in the *Fluor albus*, and hysterical suffocation: And in the cholick, he says, you'll scarce find a more excellent remedy, and even externally, it is equal to Castor in hysterick disorders. Thus our author extols its virtues in physical cases; but as the abovementioned Processes produce only a high rectified and inflammable Spirit, it cannot be taken in that form, without diluting it with some convenient vehicle. We shall therefore proceed to select some of the most pleasant that will answer this purpose. Thus were you to put one spoonful of this distilled Spirit into a glass of Cyder, Mead, Raisin-Wine, or any other artificial Wines of our own product, it would give it the true flavour of several rich foreign Wines, so that a well experienced palate shall scarce know the difference. For example, if you put two or three spoonfulls of Spirit of Clary, with a small lump of Loaf-Sugar into every bottle of Cyder; when you bottle it off, it will in a small time impart its flavour to the whole, so as not to be distinguished from true Canary-Wine. For this Spirit, *Etmuller* has observed, hath a true citron flavour, very sharp and penetrating, which exactly resembles that of Canary in taste and smell. The like effect may be produced

produced from other vinous Liquors; for if when you rack off your Raisin Wine, you add to every five gallons a quart of the aforesaid Spirit, and then let it stand for some time well stopped up, when you draw it off it will resemble Rhenish-Wine, both in taste and goodness; which you may change into Claret, by only adding about two ounces of white Argoll to the aforesaid quantity, with a quart of the juice of Bramble-berries, and one pound of Loaf-Sugar; and if you would have it strong, add one pint more of the Spirit of Clary, and it may be fined down with about two drams of Isinglass. By this method it will resemble in taste and colour the true *French* claret. But if your made Wine hath been of too weak and low a body, it will require some *French* Brandy, or more Spirit of Clary to enrich it when you barrel it; and further, if it should prove too austere or rough upon the palate, or the colour be too faint, these deficiencies may be made up, by adding more of the aforesaid juice and Sugar, until it acquire all the requisite qualifications of Claret, which will be best discovered by the experience of many trials. It may not be amiss here to observe, that of all our vegetable Products, there is none that bears the true Styp-ticity and austere taste of *French* Claret, so much as the fermented juice of Bramble-berries. The truth of which I learnt from an accident some years ago in preparing the syrup of this juice, which either by a mistake committed in boiling, or the want of a due quantity of Sugar, not having attained its due height or consistence, it was put up into a vessel, and there suffered to rest for a considerable time, as I remember near a twelvemonth, at which time I had an opportunity to taste it; And upon examination in a glass, I found it to bear all the true distinguishing characters of Claret,

ret, as to taste, smell, strength and colour; yet not wholly relying upon my own judgment, I desired the opinion of some others, more experienced than my self, who all came in readily to my sentiments. From whence I conclude, that several Wines might be produced from our own vegetable juices, as rich and delectable as even the best of those which are imported into the kingdom, provided they had a due quantity of Sugar to enrich them, and a compleat Fermentation to exalt them, with a proportionable time or age to meliorate and fine them; the failure only arising for want of these necessary circumstances: Which may be amended at any time by adding a due quantity of any fermented proof Spirit, such as Spirit of Clary, Spirit of Cyder, or Elder-Berries (or in want of these, *French Brandy*) to the new made Wines upon drawing them off, and putting 'em up into the Barrel; and by adding a little Isinglass, white of an Egg, and Wheat-flower made up into a past, they might easily be fined down, by that time they would be fit to be racked off for bottling or drinking. This Digression I hope will be easily pardoned, when it is considered, that it lays down the true method of producing these Liquors to the best advantage, and greatest perfection that they will bear.

Spirit of Elder-Berries.

TAKE the ripe berries of Elder, press out all the juice, and put it into an open headed vessel. To every gallon add three pound of Sugar (note, that some persons boil them up together, and then let the Liquor stand till it be lukewarm) then add Yeast, and work it according
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ing to the rules of Fermentation. The higher the ferment is carried, the richer the Wine will be, and consequently the Spirit the stronger, which would be yet considerably improved, if one quart of Wine-lees were added to the said quantity of fermenting Wine. When the operation is over, (which sometimes lasts ten or twelve days) what you design for Wine, tun up in a cask, with Isinglass, in order to fine it; and when it hath age, rack it off, and bottle it with a little Loaf-Sugar, and one spoonful of its own Spirit to every quart. And thus you have Elder-Wine made in its greatest perfection, which may serve as a model to prepare all other Wines from ripe succulent fruits or berries. But if you desire to obtain a Spirit from it, you must take the Liquor as soon as the Fermentation is over, and proceed to a distillation of it in an alembick, with a moderate fire, till it begin to taste sourish, and of the fæces. Reserve this distilled low Spirit in a vessel well closed up for about a fortnight longer, and rectifie it over again according to art.

Note, that a Glass-Still is more proper than a Copper-Alembick for this last Distillation. Likewise the aforesaid Elder Wine, when grown prickt, or sourish, and thereby unfit for drinking, may be distilled in a Copper Vesica with its refrigeratory (or Worm running through cold Water) after the same manner as taught before; rectifying it over again into a high proof Spirit, and reserving the after runnings as long as they come clear and limpid, under the denomination of Elder Water, serviceable for many physical uses: By this method you will obtain a larger quantity of Spirits, and also better tasted than if you had distilled your Wine before it had acquired an acid or tartish taste. The same holds true

true in all fermented Juices of vegetables. Both the Wine and Spirit of Elder are excellent anti-hydropick and anti-scorbutick medicines, and work both by Urine and Sweat; the heavier acid Salt tending downward, whilst the more volatile seeks a passage thro' the finer and smaller Vessels. For it appears upon analysis that this subject abounds with an acid and volatile concrete Salt. By which it comes to be so famous and successful in the cure of the aforesaid diseases; setting open two doors at once, as well for the scorbutick Salts to pass off by, as likewise for the obstructed and stagnating Lympha to be discharged by the urinary passages. If this then be the case, we cannot have a cheaper and pleasanter medicine than the foregoing, the Wine being of a very agreeable and delightful taste; and as a late Author observes, is a suitable drink in scorbutick habits. The Spirit (arising from the same principles) must consequently correspond in the like virtues, but upon the account of its heat and inflammability cannot be taken in the same quantity alone, therefore it is always mix'd in some convenient Vehicle for this end. And as nothing is more pleasant to some palates than Wine, we shall shew how it may be made use of to the greatest advantage: As for instance, were the fore-mention'd Wine of the same product, low, flat, and poor, two Spoonfuls of this Spirit with a lump of Loaf-Sugar put into the Bottle, would serve to recover a quart of it. Or to ten gallons of Elder-Wine, when you tun it up in the Barrel, if you add one gallon of this rectify'd Spirit of Elder, with about six or eight ounces of Loaf-Sugar dissolved in a little of the Wine, all being well mingled together, and the Vessel closed well up, it will, if suffer'd to stand two or three months,

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and then drawn off and bottled, be as strong and pleasant as several of the richest foreign Wines. This method will likewise extend to Mead, Cyder, Perry, Black-Cherry-Wine, Currant-Wine, Gooseberry-Wine, &c. all which may be amended and considerably improved by the aforesaid treatment. The true quantity of Spirit and dulcifying cannot certainly be defined, for that must be varied according to the richness or poorness of the Liquor, and the strength which you would have it; some Wines requiring even double the quantity of Spirits and Sweets that others do. Therefore by trying frequent experiments, of adding more or less, according to your palate, you will arrive to the knowledge of discerning at first view, what every particular subject requires or will bear. The Sweets I mentioned above, are nothing but a Syrup made with fine Sugar and fair Water, two parts of the former to one of the latter, boil'd up to the consistency of a Syrup, which may be clarified with the White of an Egg beaten up to a froth, and put into the boiling Syrup, and then skim'd off with all the foulness of the Sugar which adheres to it; and lastly may (if not clean enough) be run through the flannel Sleeve whilst it is hot. Note, that the Syrup made this way must just only boil up to dissolve the Sugar, which by that Time is at its due height, and if kept longer over the Fire, would be apt to candy or run into crystals, by the heat of the weather. And therefore 'tis your best method not to clarify it with Eggs, but only to keep stirring it as the Sugar dissolves, which may either be skimm'd off or separated from it, by means of the aforesaid Bag.

This simple Syrup is of great use in meliorating and improving artificial Wines, by the assistance

stance of some spirituous body, as Brandy, Spirit of Cyder, Clary, Elder-berries, or any other well tasted rectified Spirit mixed with it: Some few examples of which (to compleat this Work) I shall for the reader's benefit briefly touch upon: As for instance, one pint of any of the aforesaid rectify'd Spirits, with half the quantity of the aforesaid Syrup, put to one gallon of Cyder, or any new-made Wine, will give it the body of French Wine; to which if a due portion of Tartar or Argoll be put, it will resemble Rhenish, and by proper colouring, as described above, Claret. But if you would have it resemble Canary, then there must be a greater proportion of Spirits by one half. To every Gallon (whether of Red-streak Cyder, or Artificial Malaga Wine, which comes nearest in taste and flavour to all those imported of any) you must put in a pint and a half of Spirits (of which Clary is the best) with about twelve ounces of the aforesaid Sweets mixed; which being put into a well season'd Vessel (close bung'd up) for three or four months space will then afford a Wine in all respects equal to Canary. I have several other observations relating to Made-Wines and other cordial rich Liquors, which for brevity's sake I shall be obliged to pass over, or only just touch upon, in the description I am about to give of Raisin-Wine, or what we call,

Artificial Malaga Wine.

TAKE an open-headed Vessel large enough to contain your Fruit and Liquor, then having ready your determined quantity of Rain-Water (boiled a pretty while over the Fire, and

then suffer'd to cool) when it is just Blood-warm, to every ten gallons put forty pounds of good new Raisins, well pick'd and bruised (in a marble Mortar,) beat them well up together, that the Raisins may be all broke out of lumps, then cover up the Vessel close, with Cloths cast thereon, and (if it be in cold weather) set it near the Fire to ferment for twelve or fourteen days, stirring it about once or twice a day, in which time there will be a constant kind of hissing with the casting up of the Raisins to the top of the Liquor: then try if the Liquor be strong and vinous; if so (and the sweetness thereof be almost lost) strain off the Liquor, pressing out the Raisins as hard as you can, first with your Hands, and afterward with a Press, as long as any drop can be squeez'd out; then turn it up in a good and firm Wine-Cask, and to the aforesaid quantity put five pound of fine *Lisbon* Sugar, with a little Ale-yeast (observing that your Vessel be well warm'd and dried before you put the Liquor into it) let it stand for a Month; filling it up from time to time with some of the same Liquor (left out for that purpose) which being expired, stop it up very close that no Air may enter in (altho' it hath not then done hissing) keep it in a Cellar or other cool place for a twelve month, then bottle it up. *Note,* that you may either make use of Raisins of the Sun (as vulgarly called) or of *Malaga*, which are much cheaper.

This prescription affords the best and strongest Wine, and most likest the genuine, of any that are extant; and by reason of its simplicity, is capable of any alteration: For if you would desire it of a Rhenish taste, a little white Tartar, or Argoll, put thereto, (with half an Ounce of Isinglass, if you require it for speedy use, otherwise it is as well

well omitted) when you barrel it up, will by age acquire that perfect flavour; likewise the aforefaid Spirit of Clary and sweets, in due quantity as afore prescribed, will afford that of Canary: Or if you shall add to the aforefaid tartarized Rhenish Wine, the juice of Bramble-berries and Spirit of Clary, (or in defect of it *French Brandy*) two parts of the latter to one of the former, proportioned to your quantity of Liquor, with about half a pound of Loaf-Sugar or twelve ounces to the gallon, fining it down with a little Isinglass, and the whites of new laid Eggs mixed with Wheat Flower, all beat up well together, and put into a compact Wine Vessel close stopped up, will in time become wonderful rich, and bear the mark of true *French Claret* in taste and goodness. As to the enriching this artificial *Malaga Wine*, there will be little occasion for it, the Raisins and Sugar being in greater proportion to the quantity of Liquor, than what we meet with in any other prescription of this kind. In most of which there is a necessity to make good the deficiency with *French Brandy*, *Alicant*, and other rich Liquors, by adding one part of the former, and two of the latter, (as for example, one pint of Brandy, with a quart of *Alicant* put to the aforefaid quantity of Wine when tunned up into the Barrel) with one or two new laid Eggs, all well beaten up together; or two drachms of Isinglass to fine it down. Note, that if during the Fermentation of all vinous Liquors, you add the Lees of Wine (the more the better) they will become far richer in taste and flavour, so as scarce to be distinguished from the Wines they were extracted from. The salino-sulphureous principles with which those faeculencies abound, and from whence all the distinguishing

stinguishing properties of the subjects result, being put in action by means of Fermentation, will intimately mix with, and consequently communicate their tincture or true flavour, to the whole fermenting mass, by acting upon, and altering the principles of the fermenting fluid: As we learn from daily experience, that those Liquors are always the strongest and best tasted, and upon Distillation afford the greatest quantity of Spirit, which are fermented with a due portion of Wine-Lees. And therefore I advise that in all Liquors whatsoever designed for a Wine or Spirit, a pint or a quart of the aforesaid settlings may be always added to the Liquor designed for Fermentation. As to the transmutation or change of the taste and flavour of Liquors, effected by means of some particular ingredient put to 'em, I shall add little more than what is afore premised. The honourable Mr. Boyle (whom the learned professor Boerhave deservedly calls a prodigy of knowledge) has left us many inventions of this kind. Thus by adding *Rad. Irid. Flor.* ʒi. to ℥ii. of the above-mentioned *Malaga* Wine, you will give it the true taste of Raspberry, which by the addition of Cochineal, will afford its due tincture. The Lemmon flavour is likewise effected by *Daucus* Seed, one ounce to a gallon of fermenting Ale, or Wine; and the Spirit and Syrup of Clary counterfeits the Citron flavour, and in Wine approaches that of Canary; as does likewise a simple infusion of the said Flowers in Wine, bring it to a Rhenish. For farther satisfaction upon this head, I must refer the reader to the Author, and make an end of my performance with giving him a description of the Spirit of Cyder.

When your Cyder turns prickt and unfit for drinking

drinking, take a Barrel, or what quantity you please of it, and put it into your Still with a few Raisin stalks, and a little Bay-Salt to keep down the phlegm; then having luted all close, and put fire under, proceed in Distillation as before directed in Low Wines; which being suffered to lye a while, and then again committed to the Still with the afore said ingredients, and a few Grains, will afford a very pleasant and well tasted Spirit, fit for the improvement, either of that body from whence it was produced, or any other of the like nature. Only observe that when you design it to add strength to the artificial *French Wines*, four Gallons of this Spirit, with two of Sweets or Syrup, will be sufficient for a Hogshead of Liquor; but when for *Canary*, it will require half as much more of each: And when ever any crude juice is made use of in order to give a colour, as in making of *Claret*, a double proportion will be demanded, to make up the strength of the body of the Liquor, lowered by this means.

Having now finished what I designed for this time, I hope the objections laid against the first part will be fully satisfied by this; for as without laying down the foundations of any art, (which I have endeavoured to do in the preceding pages) the same may be accounted lame and imperfect; and consequently the Treatises written upon it (however compleat they may be said to be) are only shadows and faint representations of the whole; and though the first part of my book taught only (as it has been objected) the making of a few compound Waters, without shewing the essence of the art, which consists in raising a spirituous body, by means of Fermentation, on which the whole superstructure rests and

The NATURE of, &c.

and depends: Yet this objection has been ob-
viated by the Theory, which I subjoyned (with
many excellent and new receipts) in the second
part, and is now wholly taken away by what I
have added in the third, which teaches the whole
nature of Fermentation, the method of raising
a vinous Liquor, and from thence a rectified
Proof Spirit, with many useful and new remarks
upon every particular process. All which I have
endeavoured to deliver with the greatest plain-
ness and perspicuity imaginable, so that upon
perusal there will be found nothing (I hope) becom-
ing to render the treatise worthy of the reader's
hears, or necessary for explaining the sciences.
And I may in a manner say, that the former dark
substance is hereby enlightened, the curtain which
veiled and shadowed the body of the art, is now
withdrawn and exposed to open view; and the
former imperfect work is rendered compleat and
perfect; inasmuch that I may justly conclude in
the words of Heurnius, *Hæc certe maximi usus in
Medicina ars.*

F I N I S.



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T H E
London and Country
B R E W E R :

Containing an Account,

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| <p>I. Of the Nature of the Barley Corn, and of the proper Soils and Manures for the Improvement thereof.</p> <p>II. Of making Malts.</p> <p>III. To know good from bad Malts.</p> <p>IV. Of the Use of the Pale, Amber and Brown Malts.</p> <p>V. Of the Nature of several Waters and their Use in Brewing.</p> <p>VI. Of Grinding Malts.</p> <p>VII. Of Brewing in General.</p> <p>VIII. Of the <i>London</i> Method of Brewing Stout Butt Beer, Pale and Brown Ales.</p> <p>IX. Of the Country or private Way of Brewing.</p> <p>X. Of the Nature and Use of the Hop.</p> <p>XI. Of Boiling Malt Liquors and to Brew a Quantity of Drink in a little Room, and with a few Tubs.</p> <p>XII. Of Foxing or Tainting of</p> | <p>Malt Liquors, their Prevention and Cure.</p> <p>XIII. Of Fermenting and Working of Beers and Ales, and the unwholsome Practice of Beating in the Yeast Detected.</p> <p>XIV. Of several Artificial Lees for clearing, fining, preserving and refreshing Malt Liquors.</p> <p>XV. Of several pernicious Ingredients put into Malt Liquors to encrease their Strength.</p> <p>XVI. Of the Cellar or Repository for keeping Beers and Ales.</p> <p>XVII. Of Sweetening and Cleaning Casks.</p> <p>XVIII. Of Bunging Casks and Carrying them to some Distance.</p> <p>XIX. Of the Age and Strength of Malt Liquors.</p> <p>XX. Of the Profit and Pleasure of private Brewing, and the Charge of buying Malt Liquors.</p> |
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To which is added,

A Philosophical Account of Brewing strong *Oxober* Beer, by an Ingenious Hand.

By a Person formerly concern'd in a common Brewhouse at *London*, but for near twenty Years past has resided in the Country.

L O N D O N :

Printed and Sold by *W. Meadows*, at the *Angel* in *Cornhill*, *Mr. Astley* at the *Rose* in *St. Paul's Church-Yard*, *W. Bickerton* at *Lord Bacon's-Head* without *Temple-Bar*, and *A. Parker* in *Pall-mall*.

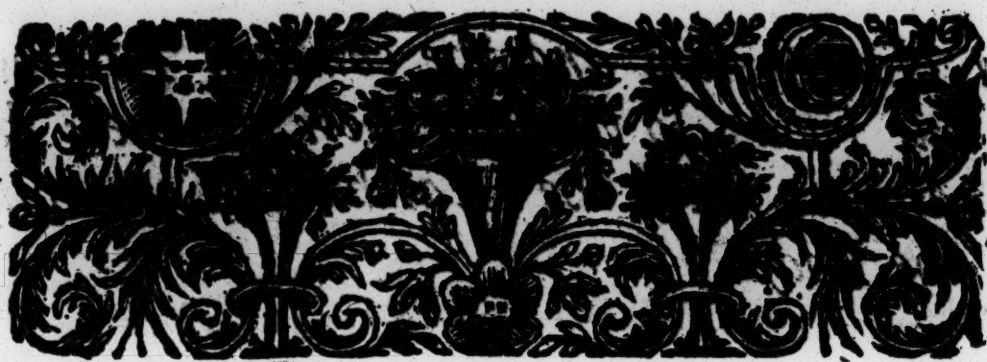
1736.

LONDON AND COUNTY

B. R. A. W. E. R.

COMMUNICATED TO THE





T H E
P R E F A C E.



THE many Inhabitants of Cities and Towns, as well as Travellers, that have for a long time suffered great Prejudices from unwholsome and unpleasant Beers and Ales, by the badness of Malts, underboiling the Worts, mixing injurious Ingredients, the unskilfulness of the Brewer, and the great Expence that Families have been at in buying them clogg'd with a heavy Excise, has moved me to undertake the writing of this Treatise on Brewing; wherein I have endeavour'd to set in a true light the many advantages of Body and Purse that may arise from a due Knowledge and Management in Brewing Malt Liquors, which are of the greatest Importance, as they are in a considerable degree

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our Nourishment and the common Diluters of our Food; so that on their goodness depends very much the Health and Longevity of the Body.

This bad Oeconomy in Brewing has brought on such a Disrepute, and made our Malt Liquors in general so odious, that many have been constrain'd, either to be at an Expence for better Drinks than their Pockets could afford, or take up with a Toast and Water to avoid the too justly apprehended ill Consequences of Drinking such Ales and Beers.

Wherefore I have given an Account of Brewing Beers and Ales after several Methods; and also several curious Receipts for feeding, fining and preserving Malt Liquors, that are most of them wholsomer than the Malt itself, and so cheap that none can object against the Charge, which I thought was the ready way to supplant the use of those unwholsome Ingredients that have been made too free with by some ill principled People meerly for their own Profit, tho' at the Expence of the Drinkers' Health.

I hope

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I hope I have adjusted that long wanted Method of giving a due Standard both to the Hop and Wort, which never was yet (as I know of) rightly ascertain'd in Print before, tho' the want of it I am perswaded has been partly the occasion of the scarcity of good Drinks, as is at this time very evident in most Places in the Nation. I have here also divulg'd the Nostrum of the Artist Brewer that he has so long valued himself upon, in making a right Judgment when the Worts are boiled to a true Crisis; a matter of considerable Consequence, because all strong Worts may be boiled too much or too little to the great Loss of the Owner, and without this Knowledge a Brewer must go on by Guess; which is a hazard that every one ought to be free from that can; and therefore I have endeavour'd to explode the old Hour-glass way of Brewing, by reason of the several Uncertainties that attend such Methods, and the hazard of spoiling both Malt and Drink; for in short where a Brewing is perform'd by Ladings over of scalding Water, there is no occasion for the Watch or Hour-glass to boil the Wort by, which is best known by the Eye, as I have
both

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both in this and my second Book made appear.

I have here observed that necessary Caution, which is perfectly requisite in the Choice of good and the Management of bad Waters; a Matter of high Importance, as the Use of this Vehicle is unavoidable in Brewing, and therefore requires a strict Inspection into its Nature; and this I have been the more particular in, because I am sensible of the great Quantities of unwholesome Waters used not only by Necessity, but by a mistaken Choice.

So also I have confuted the old received Opinion lately published by an Eminent Hand, that long Mashings are the best Methods in Brewing; an Error of dangerous Consequence to all those who brew by Ladings over of the hot Water on the Malt.

The great Difficulty, and what has hitherto proved an Impediment and Discouragement to many from Brewing their own Drinks, I think, I have in some measure removed, and made it plainly appear how a Quantity of Malt Liquor may be Brewed in a little Room and in the hottest

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test Weather, without the least Damage by Foxing or other Taint.

The Benefit of Brewing entire Guile small Beer from fresh Malt, and the ill Effects of that made from Goods after strong Beer or Ale; I have here exposed, for the sake of the Health and Pleasure of those that may easily prove their advantage by drinking of the former and refusing the latter.

By the time the following Treatise is read over and thoroughly considered, I doubt not but an ordinary Capacity will be in some degree a better Judge of good and bad Malt Liquors as a Drinker, and have such a Knowledge in Brewing that formerly he was a stranger to; and therefore I am in great Hopes these my Efforts will be one principal Cause of the reforming our Malt Liquors in most Places; and that more private Families than ever will come into the delightful and profitable Practice of Brewing their own Drinks, and thereby not only save almost half in half of Expence, but enjoy such as has passed thro' its regular Digestions, and is truly pleasant, fine, strong and healthful.

I question

The PREFACE.

I Question not but this Book will meet with some Scepticks, who being either prejudiced against the Introduction of new Improvements, or that their Interest will be hereby eclipsed in time; To such I say I do not write, because I have little hopes to reform a wrong Practice in them by Reason and Argument. But those who are above Prejudice may easily judge of the great Benefits that will accrue by the following Methods, I have here plainly made known, and of those in my Second Book that I have almost finished and hope to publish in a little time, wherein I shall set forth how to Brew without boiling Water or Wort, and several other Ways that will be of considerable Service to the World.





C H A P. I.

*Of the Nature of the Barley-Corn, and
of the proper Soils and Manures for
the Improvement thereof.*



HIS Grain is well known to excel all others for making of Malts that produce those fine *British* Liquors, Beer and Ale, which no other Nation can equalize; but as this Excellency cannot be obtain'd unless the several Ingredients are in a perfect State and Order, and these also attended with a right judgment; I shall here endeavour to treat on their several particulars, and first of Soils.

This Grain I annually sow in my Fields on diversities of Soils, and thereby have brought to my knowledge several differences arising therefrom. On our Red
B Clays

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Clays this Grain generally comes off red-dish at both ends, and sometimes all over, with a thick skin and tuff nature, somewhat like the Soil it grows in, and therefore not so valuable as that of contrary qualities, nor are the black blewish Marly Clays of the Vale much better, but Loams are, and Gravels better than them, as all the Chalks are better then Gravels; on these two last Soils the Barley acquires a whitish Body, a thin skin, a short plump kernel, and a sweet flower, which occasions those fine pale and amber Malts made at *Dunstable*, *Tring* and *Dagnal* from the Barley that comes off the white and gravelly Grounds about those Places; for it is certain there is as much difference in Barley as in Wheat or other Grain, from the sort it comes off, as appears by the excellent Wheats that grow in the marly vale Earths, Peas in Sands, and Barley in Gravels and Chalks, &c. For our Mother Earth, as it is destinated to the service of Man in the production of Vegetables, is composed of various sorts of Soils for different Seeds to grow therein. And since Providence has been pleased to allow Man this great privilege for the employment of his skill and labour to improve the same to his advantage; it certainly behoves us to acquaint ourselves with its
several

several natures, and how to adapt an agreeable Grain and Manure to their natural Soil, as being the very foundation of enjoying good and bad Malts. This is obvious by parallel Deductions from Turneps sown on rank clayey loamy Grounds, dressed with noxious Dungs that render them bitter, tuff, and nauseous, while those that grow on Gravels, Sands and Chalky Loams under the assistance of the Fold, or Soot, Lime, Ashes, Hornshavings, &c. are sweet, short and pleasant. 'Tis the same also with Salads, Asparagus, Cabbages, Garden-beans, and all other culinary Ware, that come off those rich Grounds glutted with the great quantities of *London* and other rank Dungs which are not near so pure, sweet and wholesome, as those produced from Virgin-mould and other healthy Earths and Manures.

There is likewise another reason that has brought a disreputation on some of the Chiltern-barley, and that is, the too often sowing of one and the same piece of Ground, whereby its spirituous, nitrous and sulphureous qualities are exhausted and worn out, by the constant attraction of its best juices for the nutriment of the Grain: To supply which, great quantities of Dungs are often incorporated with such Earths, whereby they become impregnated

4 *The Nature of the Barley-Corn,*

ed with four, adulterated, unwholsome qualities, that so affect the Barley that grows therein, as to render it incapable of making such pure and sweet Malts, as that which is sown in the open Champaign-fields, whose Earths are constantly rested every third Year called the Fallow-season, in order to discharge their crude, phlegmatick and sour property, by the several turnings that the Plough gives them part of a Winter and one whole Summer, which exposes the rough clotty loose parts of the Ground, and by degrees brings them into a condition of making a lodgment of those saline benefits that arise from the Earths, and afterwards fall down, and redound so much to the benefit of all Vegetables that grow therein, as being the essence and spring of Life to all things that have root, and tho' they are first exhaled by the Sun in vapour from the Earth as the spirit or breath thereof, yet is it return'd again in Snows, Hails, Dews, &c. more than in Rains, by which the surface of the Globe is saturated; from whence it reascends in the juices of Vegetables, and enters into all those productions as food and nourishment, which the Creation supplies.

Here then may appear the excellency of steeping Seed-barley in a liquor lately invented,

invented, that impregnates and loads it with Nitre and other Salts that are the nearest of all others to the true and original Spirit or Salt of the Earth, and therefore in a great measure supplies the want thereof both in inclosure and open Field; for even in this last it is sometimes very scarce, and in but small quantities, especially after a hot dry Summer and mild Winter, when little or no Snows have fell to cover the Earth and keep this Spirit in; by which and great Frosts it is often much encreased and then shews itself in the warmth of well Waters, that are often seen to wreak in the cold Seasons. Now since all Vegetables more or less partake of those qualities that the Soil and Manures abound with in which they grow; I therefore infer that all Barley so imbued, improves its productions by the ascension of those saline spirituous particles that are thus lodged in the Seed when put into the Ground, and are part of the nourishment the After-Crop enjoys; and for this reason I doubt not, but when time has got the ascendant of prejudice, the whole Nation will come into the practice of the invaluable Receipt published in two Books, entituled, *Chiltern and Vale Farming Explained*, and, *The Practical Farmer*; both writ by *William Ellis* of

6 The Nature of the Barley-Corn,

Little Gaddesden near Hempstead in Hertfordshire, not only for Barley, but other Grains.

But notwithstanding Barley may grow on a light Soil with a proper Manure; and improved by the liquor of this Receipt, yet this Grain may be damaged or spoiled by being mown too soon, which may afterwards be discovered by its shrivelled and lean body that never will make right good Malt; or if it is mown at a proper time, and if it be housed damp, or wettish, it will be apt to heat and mow-burn, and then it will never make so good Malt, because it will not spire, nor come so regularly on the floor as that which was inned dry.

Again, I have known one part of a Barley-crop almost green at Harvest, another part ripe, and another part between both, tho' it was all sown at once, occasion'd by the several situations of the Seed in the Ground, and the succeeding Droughts. The deepest came up strong and was ripe soonest, the next succeeded; but the uppermost, for want of Rain and Cover, some of it grew not at all, and the rest was green at Harvest. Now these irregularities are greatly prevented and cured by the application of the ingredients mentioned in the Receipt, which in-
fuses

fuses such a moisture into the body of the Seed, as with the help of a little Rain and the many Dews, makes it spire, take root and grow, when others are ruined for want of the assistance of such steeping.

Barley like other Grain will also degenerate, and become rank, lean and small bodied, if the same Seed is sown too often in the Soil; 'tis therefore that the best Farmers not only change the Seed every time, but take due care to have it off a contrary Soil that they sow it in to; this makes several in my neighbourhood every Year buy their Barley-feed in the Vale of *Ailsbury*, that grew there on the black clayey marly Loams, to sow in Chalks, Gravels, &c. Others every second Year will go from hence to *Fullham* and buy the Forward or Rath-ripe Barley that grows there on Sandy-ground; both which Methods are great Improvements of this Corn, and whether it be for sowing or malting, the plump, weighty and white Barley-corn, is in all respects much kinder than the lean flinty Sorts.

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C H A P. II.

Of making Malts.

AS I have described the Ground that returns the best Barley, I now come to treat of making it into Malt; to do which, the Barley is put into a leaden or tyled Cistern that holds five, ten or more Quarters, that is covered with water four or six Inches above the Barley to allow for its Swell; here it lyes five or six Tides as the Malster calls it, reckoning twelve Hours to the Tide, according as the Barley is in body or in dryness; for that which comes off Clays, or has been wash'd and damag'd by Rains, requires less time than the dryer Grain that was inned well and grew on Gravels or Chalks; the smooth plump Corn imbibing the water more kindly, when the lean and steely Barley will not so naturally; but to know when it is enough, is to take a Corn end-ways between the Fingers and gently crush it, and if it is in all parts mellow, and the husk opens or starts a little from the body of the Corn, then it is enough: The nicety of this is a material Point; for if it is infus'd too much, the sweetness of the Malt will be greatly taken off, and yield the less Spirit, and

so will cause deadness and founess in Ale or Beer in a short time, for the goodness of the Malt contributes much to the preservation of all Ales and Beers. Then the water must be drain'd from it very well, and it will come equal and better on the floor, which may be done in twelve or sixteen Hours in temperate weather, but in cold near thirty. From the Cistern it is put into a square Hutch or Couch, where it must lye thirty Hours for the Officer to take his Gage, who allows four Bushels in the Score for the Swell in this or the Cistern, then it must be work'd Night and Day in one or two Heaps as the weather is cold or hot, and turn'd every four, six or eight Hours, the outward part inwards and the bottom upwards, always keeping a clear floor that the Corn that lies next to it be not chill'd; and as soon as it begins to come or spire, then turn it every three, four or five Hours, as was done before according to the temper of the Air, which greatly governs this management, and as it comes or works more, so must the Heap be spreaded and thinned larger to cool it. Thus it may lye and be work'd on the floor in several Parallels, two or three Foot thick, ten or more Foot broad, and fourteen or more in length to Chip and Spire, but not too much nor too fast; and when it

10 *The Nature of the Barley-Corn,*

is come enough, it is to be turned twelve or sixteen times in twenty-four Hours, if the Season is warm, as in *March, April* or *May*; and when it is fixed and the Root begins to be dead, then it must be thickned again and carefully kept often turned and work'd, that the growing of the Root may not revive, and this is better done with the Shoes off than on; and here the Workman's Art and Diligence in particular is tryed in keeping the floor clear and turning the Malt often, that it neither moulds nor Aker-spires, that is, that the Blade does not grow out at the opposite end of the Root; for if it does, the flower and strength of the Malt is gone, and nothing left behind but the Aker-spire, Husk and Tail: Now when it is at this degree and fit for the Kiln, it is often practised to put it into a Heap and let it lye twelve Hours before it is turned, to heat and mellow, which will much improve the Malt if it is done with moderation, and after that time it must be turned every six Hours during twenty four; but if it is overheated, it will become like Grease and be spoiled, or at least cause the Drink to be unwholsome; when this Operation is over, it then must be put on the Kiln to dry four, six or twelve Hours, according to the nature of the Malt, for
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the pale sort requires more leisure and less fire than the amber or brown sorts: Three Inches thick was formerly thought a sufficient depth for the Malt to lye on the Hair-cloth, but now six is often allowed it to a fault; fourteen or sixteen Foot square will dry about two Quarters if the Malt lyes four Inches thick, and here it should be turned every two, three or four Hours keeping the Hair-cloth clear: The time of preparing it from the Cistern to the Kiln is uncertain, according to the Season of the Year; in moderate weather three Weeks is often sufficient. If the Exciseman takes his Gage on the floor he allows ten in the Score, but he sometimes Gages in Cistern, Couch, Floor and Kiln, and where he can make most, there he fixes his Charge: When the Malt is dried, it must not cool on the Kiln, but be directly thrown off, not into a Heap, but spreaded wide in an airy place, till it is thoroughly cool, then put it into a Heap or otherwise dispose of it.

There are several methods used in drying of Malts, as the Iron Plate-frame, the Tyle-frame, that are both full of little Holes: The Brass-wyred and Iron-wyred Frame, and the Hair-cloth; the Iron and Tyled one, were chiefly Invented for drying of brown Malts and saving of Fuel,
for

12 *The Nature of the Barley-Corn,*

for these when they come to be thorough hot will make the Corns crack and jump by the fierceness of their heat, so that they will be roasted or scorch'd in a little time, and after they are off the Kiln, to plump the body of the Corn and make it take the Eye, some will sprinkle water over it that it may meet with the better Market: But if such Malt is not used quickly, it will flacken and lose its Spirits to a great degree, and perhaps in half a Year or less may be taken by the Whools and spoiled: Such hasty dryings or scorplings are also apt to bitter the Malt by burning its skin, and therefore these Kilns are not so much used now as formerly: The Wyre-frames indeed are something better, yet they are apt to scorch the outward part of the Corn, that cannot be got off so soon as the Hair-cloth admits of, for these must be swept, when the other is only turned at once; however these last three ways are now in much request for drying pale and amber Malts, because their fire may be kept with more leisure, and the Malt more gradually and truer dyed, but by many the Hair-cloth is reckoned the best of all.

Malts are dryed with several sorts of Fuel; as the Coak, Welch-coal, Straw, Wood and Fern, &c. But the Coak is reckoned

reckoned by most to exceed all others for making Drink of the finest Flavour and pale Colour, because it sends no smoak forth to hurt the Malt with any offensive tang, that Wood, Fern and Straw are apt to do in a lesser or greater degree; but there is a difference even in what is call'd Coak, the right sort being large Pit-coal chark'd or burnt in some measure to a Cinder, till all the Sulphur is consumed and evaporated away, which is called Coak, and this when it is truly made is the best of all other Fuels; but if there is but one Cinder as big as an Egg, that is not thoroughly cured, the smoak of this one is capable of doing a little damage, and this happens too often by the negligence or avarice of the Coak-maker: There is another sort by some wrongly called Coak, and rightly named Culme or Welch-coal, from *Swanzey* in *Pembroke-shire*, being of a hard stony substance in small bits resembling a shining Coal, and will burn without smoak, and by its sulphureous effluvia cast a most excellent whiteness on all the outward parts of the grainy body: In *Devonshire* I have seen their Marble or grey Fire-stone burnt into Lime with the strong fire that this Culme makes, and both this and the Chark'd Pit-coal affords a most sweet moderate

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derate and certain fire to all Malt that is
dried by it.

Straw is the next sweetest Fuel, but
Wood and Fern worst of all.

Some I have known put a Peck or
more of Peas, and malt them with five
Quarters of Barley, and they'll greatly
mellow the Drink, and so will Beans; but
they won't come so soon, nor mix so con-
veniently with the Malt, as the Pea will.

I knew a Farmer, when he sends five
Quarters of Barley to be Malted, puts in
half a Peck or more of Oats amongst
them, to prove he has justice done him
by the Maker, who is hereby confin'd
not to Change his Malt by reason others
won't like such a mixture.

But there is an abuse sometimes com-
mitted by a necessitous Malster, who to
come by Malt sooner than ordinary, makes
use of Barley before it is thoroughly sweat-
ed in the Mow, and then it never makes
right Malt, but will be steely and not
yield a due quantity of wort, as I knew
it once done by a Person that thrashed
the Barley immediately from the Cart as
it was brought out of the Field, but
they that used its Malt suffered not a lit-
tle, for it was impossible it should be
good, because it did not thoroughly Chip
or Spire on the floor, which caused this
fort

fort of Malt, when the water was put to it in the Mash-tub, to swell up and absorb the Liquor, but not return its due quantity again, as true Malt would, nor was the Drink of this Malt ever good in the Barrel, but remain'd a raw insipid Beer, past the Art of Man to Cure, because this, like Cyder made from Apples directly off the Tree, that never sweated out their phlegmatick crude juice in the Heap, cannot produce a natural Liquor from such unnatural management; for Barley certainly is not fit to make Malt of till it is fully mellowed and sweated in the Mow, and the Season of the Year is ready for it, without both which there can be no assurance of good Malt: Several instances of this untimely making Malt I have known to happen, that has been the occasion of great quantities of bad Ales and Beers, for such Malt retaining some of its Barley nature, or that the Season of the Year is not cold enough to admit of its natural working on the Floor, is not capable of producing a true Malt, but will cause its Drink to stink in the Cask instead of growing fit for use, as not having its genuine Malt-nature to cure and preserve it, which all good Malts contribute to as well as the Hop.

(There is another damage I have known accrue to the Buyer of Malt by Mellilet, a most

16 *The Nature of the Barley-Corn,*

a most stinking Weed that grows amongst some Barley, and is so mischievously predominant, as to taint it to a sad degree, because its black Seed like that of an Onion, being lesser than the Barley, cannot be entirely separated, which obliges it to be malted with the Barley, and makes the Drink so heady that it is apt to fuddle the unwary by drinking a small quantity. This Weed is so natural to some Ground, that the Farmer despairs of ever extirpating it, and is to be avoided as much as possible, because it very much hurts the Drink that is made from Malt mixed with it, by its nauseous Scent and Taste, as may be perceived by the Ointment made with it that bears its Name: I knew a Victualler that bought a parcel of Malt that this weed was amongst, and it spoiled all the Brewings and Sale of the Drink, for it's apt to cause Fevers, Colicks and other Distempers in the Body.

Darnel is a rampant Weed and grows much amongst some Barley, especially in the bad Husbandman's Ground, and most where it is sown with the Seed-barley: It does the least harm amongst Malt, because it adds a strength to it, and quickly intoxicates, if there is much in it; but where there is but little, the Malster regards it not, for the sake of its inebriating quality.

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There are other Weeds or Seeds that annoy the Barley; but as the Screen, Sieve and throwing will take most of them out, there does not require here a Detail of their Particulars. Oats malted as Barley is, will make a weak, soft, mellow and pleasant Drink, but Wheat when done so, will produce a strong heady nourishing well-tasted and fine Liquor, which is now more practised then ever.



C H A P. III.

To know good from bad Malts.

THIS is a Matter of great Importance to all Brewers, both publick and private, for 'tis common for the Seller to cry all is good, but the Buyer's Case is different; wherefore it is prudential to endeavour to be Master of this Knowledge; for I have heard a great Malster that lived towards *Ware*, say, he knew a grand Brewer, that wetted near two hundred Quarters a Week, was not a judge of good and bad Malts, without which 'tis impossible to draw a true length of Ale or Beer. To do this I know but of few
C Ways,

18 *The Nature of the Barley-Corn,*

Ways, *First*, By the Bite ; Is to break the Malt Corn across between the Teeth, in the middle of it or at both Ends, and if it tasteth mellow and sweet, has a round body, breaks soft, is full of flower all its length, smells well and has a thin skin, then it is good ; *Secondly*, By Water ; Is to take a Glass near full, and put in some Malt, and if it swims, it is right, but if any sinks to the bottom, then it is not true Malt, but steely and retains somewhat of its Barley nature ; yet I must own this is not an infallible Rule, because if a Corn of Malt is crack'd, split or broke, it will then take the water and sink, but there may an allowance be given for such incidents, and still room enough to make a judgment. *Thirdly*, Malt that is truly made will not be hard and steely, but of so mellow a Nature, that if forced against a dry Board, will mark and cast a white Colour almost like Chalk. *Fourthly*, Malt that is not rightly made will be part of it of a hard Barley nature, and weigh heavier than that which is true Malt.

C H A P. IV.

*Of the Nature and Use of Pale, Amber
and Brown Malts.*

THE pale Malt is the slowest and slackest dried of any, and where it has had a leisure fire, a sufficient time allowed it on the Kiln, and a due care taken of it; the flower of the grain will remain in its full quantity, and thereby produce a greater length of wort, than the brown high dried Malt, for which reason it is sold for one or two shillings *per* Quarter more than that: This pale Malt is also the most nutritious sort to the body of all others, as being in this state the most simple and nearest to its Original Barley-corn, that will retain an Alcalous and Balsamick quality much longer than the brown sort; the tender drying of this Malt bringing its body into so soft a texture of Parts, that most of the great Brewers, brew it with Spring and Well-waters, whose hard and binding Properties they think agrees best with this loose-bodied Malt, either in Ales or Beers, and which will also dispense with hotter waters in brewing of it, than the brown Malt can.

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The amber-colour'd Malt is that which is dryed in a medium degree, between the pale and the brown, and is very much in use, as being free of either extrem. Its colour is pleasant, its taste agreeable and its nature wholesome, which makes it be prefer'd by many as the best of Malts; this by some is brewed either with hard or soft waters, or a mixture of both.

The brown Malt is the soonest and highest dryed of any, even till it is so hard, that it's difficult to bite some of its Corns asunder, and is often so crufted or burnt, that the farinous part loses a great deal of its essential Salts and vital Property, which frequently deceives its ignorant Brewer, that hopes to draw as much Drink from a quarter of this, as he does from pale or amber sorts: This Malt by some is thought to occasion the Gravel and Stone, besides what is commonly called the Heart-burn; and is by its steely nature less nourishing than the pale or amber Malts, being very much impregnated with the fiery fumiferous Particles of the Kiln, and therefore its Drink sooner becomes sharp and acid than that made from the pale or amber sorts, if they are all fairly brewed: For this reason the *London* Brewers mostly use the *Thames*
OF

or *New River* waters to brew this Malt with, for the sake of its soft nature; whereby it agrees with the harsh qualities of it better than any of the well or other hard Sorts, and makes a luscious Ale for a little while, and a But-beer that will keep very well five or six Months, but after that time it generally grows stale, notwithstanding there be ten or twelve Bushels allowed to the Hogshead, and it be hopp'd accordingly.

Pale and amber Malts dryed with Coak or Culm, obtains a more clean bright pale Colour than if dryed with any other Fuel, because there is not smoak to darken and sully their Skins or Husks, and give them an ill relish, that those Malts little or more have, which are dryed with Straw, Wood, or Fern, &c. The Coak or *Welch* Coal also makes more true and compleat Malt, as I have before hinted, than any other Fuel, because its fire gives both a gentle and certain Heat, whereby the Corns are in all their Parts gradually dryed, and therefore of late these Malts have gained such a Reputation that great quantities have been consumed in most Parts of the Nation for their wholesome Natures and sweet fine Taste: These make such fine Ales and But-beers, as has tempted several of our Malsters in my Neighbourhood

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hood to burn Coak or Culm at a great expence of Carriage thirty Miles from *London*.

Next to the Coak-dryed Malt, the Straw-dryed is the sweetest and best tasted: This I must own is sometimes well Malted where the Barley, Wheat, Straw, Conveniencies and the Maker's Skill are good; but as the fire of the Straw is not so regular as the Coak, the Malt is attended with more uncertainty in its making, because it is difficult to keep it to a moderate and equal Heat, and also exposes the Malt in some degree to the Taste of the smoak.

Brown Malts are dryed with Straw, Wood and Fern, &c. the Straw-dryed is far the best, but the Wood sort has a most unnatural Taste, that few can bear with, but the necessitous, and those that are accustomed to its strong smoaky tang; yet is it much used in some of the Western Parts of *England*, and many thousand Quarters of this Malt has been formerly uled in *London* for brewing the Butt-keeping-beers with, and that because it sold for two shillings *per* Quarter cheaper than the Straw-dryed Malt, nor was this Quality of the Wood-dryed Malt much regarded by some of its Brewers, for that its ill Taste is lost in nine or twelve Months, by the
Age

Age of the Beer, and the strength of the great Quantity of Hops that were used in its Preservation.

The Fern-dryed Malt is also attended with a rank disagreeable Taste from the smoak of this Vegetable, with which many Quarters of Malt are dryed, as appears by the great Quantities annually cut by Malsters on our Commons, for the two prevalent Reasons of cheapness and plenty.

At *Bridport* in *Dorsetshire*, I knew an Inn-keeper use half Pale and half Brown Malt for Brewing his Butt-beers, that proved to my Palate the best I ever drank on the Road, which I think may be accounted for, in that the Pale being the slackest, and the Brown the hardest dryed, must produce a mellow good Drink by the help of a requisite Age, that will reduce those extreams to a proper Quality.

C H A P. V.

Of the Nature of several Waters and their use in Brewing. And first of Well-waters.

WA T E R next to Malt is what by course comes here under Consideration as a Matter of great Importance in Brewing of wholesome fine Malt-liquors, and is of such Consequence that it concerns every one to know the nature of the water he Brews with, because it is the Vehicle by which the nutritious and pleasant Particles of the Malt and Hop are conveyed into our Bodies, and there becomes a diluter of our Food : Now the more simple and freer every water is from foreign Particles, the better it will answer those Ends and Purposes ; for, as Dr. *Mead* observes, some waters are so loaded with stony Corpuscles, that even the Pipes thro' which they are carried, in time are incrusted and stopt up by them, and is of that petrifying nature as to breed the Stone in the Bladder, which many of the *Parisians* have been instances of, by using this sort of water out of the River *Seine*. And of this Nature is another at *Rowel*

in *Northamptonshire*, which in no great distance of time so clogs the Wheel of an overshot Mill there, that they are forced with convenient Instruments to cut way for its Motion; and what makes it still more evident, is the sight of those incruusted Sides of the Tea-kettles, that the hard Well-waters are the occasion of, by being often boiled in them: And it is further related by the same Doctor, that a Gentlewoman afflicted with frequent returns of violent Colick Pains was cured by the Advice of *Van Helmont*, only by leaving off drinking Beer brewed with Well-water; It's true, such a fluid has a greater force and aptness to extract the tincture out of Malt, than is to be had in the more innocent and soft Liquor of Rivers; But for this very reason it ought not, unless upon meer necessity, to be made use of; this Quality being owing to the mineral Particles and alluminous Salts with which it is impregnated. For these waters thus saturated, will by their various gravities in circulation, deposit themselves in one part of the animal Body or other, which has made some prove the goodness of Water by the lightness of its body in the Water Scales, now sold in several of the *London* Shops, in order to avoid the Scorbutick, Colicky, Hypochondri-

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ack, and other ill Effects of the Clayey and other gross Particles of stagnating Well-waters, and the calculous Concretions of others; and therefore such waters ought to be mistrusted more than any, where they are not pure clear and soft, or that don't arise from good Chalks or stony Rocks, that are generally allowed to afford the best of all the Well sorts.

Spring-waters are in general liable to partake of those minerals thro' which they pass, and are salubrious or mischievous accordingly. At *Uppingham* in *Rutland*, their water is said to come off an Allum-rock, and so tinges their Beer with its saline Quality, that it is easily tasted at the first Draught. And at *Dean* in *Northamptonshire*, I have seen the very Stones colour the rusty Iron by the constant running of a Spring-water; but that which will Lather with Soap, or such soft water that percolates through Chalk, or a Grey Fire-stone, is generally accounted best, for Chalks in this respect excell all other Earths, in that it administers nothing unwholesome to the perfluent waters, but undoubtedly absorbs by its drying spongy Quality any ill minerals that may accompany the water that runs thro' them. For which reason they throw in great Quantities of Chalk into their Wells
at

at *Ailsbury* to soften their water, which coming off a black Sand-stone, is so hard and sharp that it will often turn their Beer sour in a Week's time, so that in its Original State it's neither fit to Wash nor Brew with, but so long as the Alcalous soft Particles of the Chalk holds good, they put it to both uses.

River-waters are less liable to be loaded with metallick, petrifying, saline and other insidious Particles of the Earth, than the Well or Spring sorts are, especially at some distance from the Spring-head, because the Rain water mixes with and softens it, and are also much cured by the Sun's heat and the Air's power, for which reason I have known several so strict, that they won't let their Horses drink near the first rise of some of them; this I have seen the sad Effects of, and which has obliged me to avoid two that run cross a Road in *Bucks* and *Hertfordshire*: But in their runnings they often collect gross Particles from ouzy muddy mixtures particularly near Town, that make the Beer subject to new fermentations, and grow foul upon alteration of weather as the *Thames*-water generally does; yet is this for its softness much better than the hard sort, however both these waters are used by some Brewers as I shall hereafter observe;

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observe; but where a River-water can be had clear in a dry time, when no great Rain has lately fell out of Rivulets or Rivers that have a Gravelly, Chalky, Sandy or Stone-bottom free from the Disturbance of Cattle, &c. and in good Air, as that of *Barkhamstead St. Peters* in *Hertfordshire* is; it may then justly claim the name of a most excellent water for Brewing, and will make a stronger Drink with the same quantity of Malt than any of the Well-waters; infomuch that that of the *Thames* has been proved to make as strong Beer with seven Bushels of Malt, as Well-water with eight; and so are all River-waters in a proportionable degree, and where they can be obtain'd clean and pure, Drink may be drawn fine in a few Days after Tunning.

Rain-water is very soft, of a most simple and pure nature, and the best Diluter of any, especially if received free from Dirt, and the Salt of Mortar that often mixes with it as it runs off tyled Roofs; this is very agreeable for brewing of Ales that are not to be kept a great while, but for Beers that are to remain some time in the Casks, it is not so well, as being apt to putrify the soonest of any.

Pond-waters; this includes all standing waters chiefly from Rain, and are good

or bad as they happen; for where there is a clean bottom, and the water lies undisturbed from the tread of Cattle, or too many Fish, in an open found Air, in a large quantity, and where the Sun has free access; it then comes near, if not quite as good as Rain or River-waters, as is that of *Blew-pot Pond* on the high Green at *Gaddeſden* in *Hertfordſhire* and many others, which are often prefer'd for Brewing, even beyond many of the ſoft Well-waters about them. But where it is in a ſmall quantity, or full of Fiſh (eſpecially the ſling Tench) or is ſo diſturbed by Cattle as to force up Mud and Filth; it is then the moſt foul and diſagreeable of all others: So is it likewise in long dry Seasons when our Pond-waters are ſo low as obliges us to ſtrain it thro' Sieves before we can uſe it, to take out the ſmall red Worms and other Corruptions, that our ſtagnant waters are generally then too full of. The lateſt and beſt Doctors have ſo far ſcrutinized into the prime Cauſe of our *British* malady the Scurvy, as to affirm its firſt riſe is from our unwholſome ſtagnating waters, and eſpecially thoſe that come off a clayey ſurface, as there are about *Londonderry* and *Amſterdam*, for that where the waters are worſt, there this Diſtemper is moſt common,

30 *The Nature of the Barley-Corn,*
common, so that in their Writings they
have put it out of all doubt, that most of
our complicated symptoms that are rank'd
under this general Name, if they don't
take their beginning from such water, do
own it to be their chief Cause.



C H A P. VI.

Of Grinding Malts.

AS trifling as this Article in Brewing
may seem at first it very worthily
deserves the notice of all concern'd there-
in, for on this depends much the good of
our Drink, because if it is ground too
small the flower of the Malt will be the
easier and more freely mix with the wa-
ter, and then will cause the wort to run
thick, and therefore the Malt must be on-
ly just broke in the Mill, to make it emit
its Spirit gradually, and incorporate its
flower with the water in such a manner
that first a stout Beer, then an Ale, and
afterwards a small Beer may be had at
one and the same Brewing, and the wort
run off fine and clear to the last. Many
are likewise so sagacious as to grind their
brown

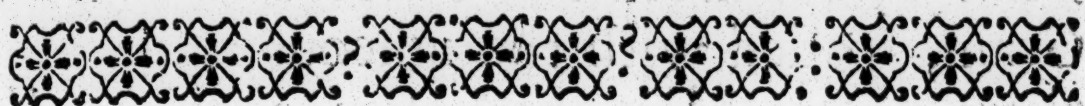
brown Malt a Fortnight before they use it, and keep it in a dry Place from the influence of too moist an Air, that it may become mellow by losing in a great measure the fury of its harsh fiery Particles, and its steely nature, which this sort of Malt acquires on the Kiln; however this as well as many other hard Bodies may be reduced by Time and Air into a more soluble, mellow and soft Condition, and then it will imbibe the water and give a natural kind tincture more freely, by which a greater quantity and stronger Drink may be made, than if it was used directly from the Mill, and be much smother and better tasted. But the pale Malt will be fit for use at a Week's end, because the leifureness of their drying endows them with a softness from the time they are taken off the Kiln to the time they are brewed, and supplies in them what Time and Air must do in the brown sorts. This method of grinding Malt so long before-hand can't be so conveniently practised by some of the great Brewers, because several of them Brew two or three times a Week, but now most of them out of good Husbandry grind their Malts into the Tun by the help of a long descending wooden Spout, and here they save the Charge of emptying or uncasing
it

32 *The Nature of the Barley-Corn,*

it out of the Bin (which formerly they used to do before this new way was discovered) and also the waste of a great deal of the Malt-flower that was lost when carryed in Baskets, whereas now the Cover of the Tun prevents all that Damage. In my common Brewhouse at *London*, I ground my Malt between two large Stones by the Horse-mill, that with one Horse would grind quarters an Hour. But in the Country I use a steel Hand-mill, that Cost at first forty Shillings, which will by the help of only one Man grind six or eight Bushels in an Hour, and will last a Family many Years without hardning or cutting. There are some old-fashion'd stone Hand-mills in being, that some are Votaries for and prefer to the Iron ones, because they alledge that these break the Corn's body, when the Iron ones only cut it in two, which occasions the Malt so broke by the Stones, to give the water a more easy, free and regular Power to extract its Virtue, than the Cut-malt can that is more confin'd within its Hull. Notwithstanding the Iron ones are now mostly in Use for their great Dispatch and long Duration. In the Country it is frequently done by some to throw a Sack of Malt on a Stone or Brick-floor as soon as it is ground, and there let it lye, giving

and of the proper Soils, &c. 33

giving it one turn, for a Day or two, that the Stones or Bricks may draw out the fiery Quality it received from the Kiln, and give the Drink a soft mild Taste.



C H A P. VII.

Of Brewing in general.

BREWING, like several other Arts is prostituted to the opinionated Ignorance of many conceited Pretenders, who if they have but seen or been concern'd in but one Brewing, and that only one Bushel of Malt, assume the Name of a Brewer and dare venture on several afterwards, as believing it no other Task, than more Labour, to Brew a great deal as well as a little; from hence it partly is, that we meet with such hodge-podge Ales and Beers, as are not only disagreeable in Taste and Foulness, but indeed unwholesome to the Body of Man, for as it is often drank thick and voided thin, the Feces or gross part must in my Opinion remain behind in some degree. Now what the Effects of that may be, I must own I am not Physician enough to explain,

34 *The Nature of the Barley-Corn,*

plain, but shrewdly suspect it may be the Cause of Stones, Colicks, Obstructions, and several other Chronical Distempers; for if we consider that the sediments of Malt-liquors are the refuse of a corrupted Grain, loaded with the igneous acid Particles of the Malt, and then again with the corrosive sharp Particles of the Yeast, it must consequently be very pernicious to the *British* human Body especially, which certainly suffers much from the animal Salts of the great Quantities of Flesh that we Eat more than People of any other Nation whatsoever; and therefore are more then ordinarily obligated not to add the scorbutick mucilaginous Qualities of such gross unwholsome Particles, that every one makes a lodgment of in their Bodies, as the Liquors they drink are more or less thick; for in plain Truth, no Malt-liquor can be good without it's fine. The late Curious *Simon Harcourt* Esq; of *Penly*, whom I have had the honour to drink some of his famous *October* with, thought the true Art of Brewing of such Importance, that it is said to Cost him near twenty Pounds to have an old Daysman taught it by a *Welch* Brewer, and sure it was this very Man exceeded all others in these Parts afterwards in the Brewing of that which he called his
October

October Beer. So likewise in *London* they lay such stress on this Art, that many have thought it worth their while to give one or two hundred Guineas with an Apprentice: This Consideration also made an Ambassador give an extraordinary Encouragement to one of my Acquaintance to go over with him, that was a great Master of this Science. But notwithstanding all that can be said that relates to this Subject, there are so many Incidents attending Malt-liquors, that it has puzzled several expert Men to account for their difference, though brewed by the same Brewer, with the same Malt, Hops and Water, and in the same Month and Town, and tapp'd at the same time: The Beer of one being fine, strong and well Tasted, while the others have not had any worth drinking, now this may be owing to the different Weather in the same Month, that might cause an Alteration in the working of the Liquors, or that the Cellar may not be so convenient, or that the Water was more disturbed by Winds or Rains, &c. But it has been observed that where a Gentleman has imployed one Brewer constantly, and uses the same sort of Ingredients, and the Beer kept in dry Vaults or Cellars that have two or three Doors; the Drink has been generally

D 2

good.

36 *The Nature of the Barley-Corn,*

good. And where such Malt-liquors are kept in Butts, more time is required to ripen, meliorate and fine them, than those kept in Hogsheads, because the greater quantity must have the longer time; so also a greater quantity will preserve itself better than a lesser one, and on this account the Butt and Hogshead are the two best sized Casks of all others; but all under a Hogshead hold rather too small a quantity to keep their Bodies. The Butt is certainly a most noble Cask for this use, as being generally set upright, whereby it maintains a large Cover of Yeast, that greatly contributes to the keeping in the Spirits of the Beer, admits of a most convenient broaching in the middle and its lower part, and by its broad level Bottom, gives a better lodgment to the fining and preserving Ingredients, than any other Cask whatsoever that lyes in the long Cross-form. Hence it partly is, that the common Butt-beer is at this time in greater Reputation than ever in *London*, and the Home-brew'd Drinks out of Credit; because the first is better cured in its Brewing, in its Quantity, in its Cask, and in its Age; when the latter has been loaded with the pernicious Particles of great Quantities of Yeast, of a short Age, and kept in small Casks,

Casks, that confines its Owner, only to Winter Brewing and Sale, as not being capable of sustaining the Heat of the Weather, for that the acidity of the Yeast brings on a sudden hardness and staleness of the Ale, which to preserve in its mild Ale-y Taste, will not admit of any great Quantity of Hops; and this is partly the reason that the handful of Salt which the *Plymouth* Brewers put into their Hog-head, hinders their Ale from keeping, as I shall hereafter take notice of.



C H A P. VIII.

The London Method of Brewing.

IN a great Brewhouse that I was concern'd in, they wetted or used a considerable Quantity of Malt in one Week in Brewing Stout-beer, common Butt-beer, Ale and small Beer, for which purpose they have River and Well Waters, which they take in several degrees of Heat, as the Malt, Goods and Grain are in a condition to receive them, and according to the Practice there I shall relate the following Particulars, *viz.*

D 3

For

38 *The Nature of the Barley-Corn,*

For Stout Butt Beer.

This is the strongest Butt-Beer that is Brewed from brown Malt, and often sold for forty Shillings the Barrel, or six Pound the Butt out of the wholesale Cellars: The Liquor (for it is Sixpence forfeit in the *London* Brewhouse if the word Water is named) in the Copper designed for the first Mash, has a two Bushel Basket, or more, of the most hully Malt throw'd over it, to cover its Top and forward its Boiling; this must be made very hot, almost ready to boil, yet not so as to blister, for then it will be in too high a Heat; but as an indication of this, the foul part of the Liquor will ascend, and the Malt swell up, and then it must be parted, look'd into and felt with the Finger or back of the Hand, and if the Liquor is clear and can but be just endured, it is then enough, and the Stoker must damp his fire as soon as possible by throwing in a good Parcel of fresh Coals, and shutting his Iron vent Doors, if there are any; immediately on this they let as much cold Liquor or Water run into the Copper as will make it all of a Heat, somewhat more than Blood-warm, this they Pump over, or let it pass by a Cock into
an

an upright wooden square Spout or Trunk, and it directly rises thro' the Holes of a false Bottom into the Malt, which is work'd by several Men with Oars for about half an Hour, and is called the first and stiff Mash: While this is doing, there is more Liquor heating in the Copper that must not be let into the mash Tun till it is very sharp, almost ready to boil, with this they Mash again, then cover it with several Baskets of Malt, and let it stand an Hour before it runs into the Under-back, which when boiled an Hour and a half with a good quantity of Hops makes this Stout. The next is Mash'd with a cooler Liquor, then a sharper, and the next Blood-warm or quite Cold; by which alternate degrees of Heat, a Quantity of small Beer is made after the Stout.

*For Brewing strong brown Ale called
Stitch.*

This is most of it the first running of the Malt, but yet of a longer Length than is drawn for the Stout; It has but few Hops boiled in it, and is sold for Eight-pence *per* Gallon at the Brewhouse out of the Tun, and is generally made to amend the common brown Ale with, on particular Occasions. This Ale I remem-

40 *The Nature of the Barley-Corn,*
ber was made use of by *Medlicot*
Esq; in the beginning of a Consumption,
and I heard him say, it did him very
great Service, for he lived many Years
afterwards.

*For Brewing common brown Ale and Start-
ing Beer.*

They take the Liquors from the brown Ale as for the Stout, but draw a greater Quantity from the Malt, than for Stout or Stitch, and after the first and second Mash they Cap the Goods with fresh Malt to keep in the Spirit and Boil it an Hour; after this, small Beer is made of the same Goods. Thus also the common brown Starting Butt-Beer is Brewed, only boiled with more Hops an Hour and a half, and work'd cooler and longer than the brown Ale, and a shorter Length drawn from the Malt. But it is often practised after the brown Ale, and where a Quantity of small Beer is wanted, or that it is to be Brewed better than ordinary, to put so much fresh Malt on the Goods as will answer that purpose.

For

For Brewing Pale and Amber Ales and Beers.

As the brown Malts are Brewed with River, these are Brewed with Well or Spring Liquors. The Liquors are by some taken sharper for pale than brown Malts, and after the first scalding Liquor is put over, some lower the rest by degrees to the last which is quite Cold, for their small Beer; so also for Butt-Beers there is no other difference than the addition of more Hops, and boiling, and the method of working. But the reasons for Brewing pale Malts with Spring or hard Well waters, I have mentioned in my second Book of Brewing.

For Brewing Entire Guile small Beer.

On the first Liquor they throw some hully Malt to shew the break of it, and when it is very sharp, they let in some cold Liquor, and run it into the Tun milk warm; this is mash'd with thirty or forty pulls of the Oar, and let stand till the second Liquor is ready, which must be almost scalding hot to the back of the Hand, then run it by the Cock into the Tun, mash it up and let it stand an Hour before

42 *The Nature of the Barley-Corn,*
before it is spended off into the Under-
back: These two pieces of Liquor will
make one Copper of the first wort, with-
out putting any fresh Malt on the Goods;
the next Liquor to be Blood-warm, the
next sharp, and the next cool or cold; for
the general way in great Brewhouses is
to let a cool Liquor precede a sharp one,
because it gradually opens the Pores of
the Malt and Goods, and prepares the
way for the hotter Liquor that is to fol-
low.

*The several Lengths or Quantities of
Drinks that have been made from Malt,
and their several Prices, as they have
been sold at a common Brewhouse.*

For Stout-Beer, is commonly drawn
one Barrel off a quarter of Malt, and sold
for thirty Shillings *per* Barrel from the
Tun. For Stitch or strong brown Ale,
one Barrel and a Firkin, at one and twen-
ty Shillings and Fourpence *per* Barrel from
the Tun. For common brown Ale, one
Barrel and a half or more, at sixteen Shil-
lings *per* Barrel, that holds thirty two
Gallons, from the Tun. For Intire small
Beer, five or six Barrels off a Quarter, at
seven or eight Shillings *per* Barrel from
the Tun. For Pale and Amber Ale, one
Barrel

Barrel and a Firkin, at one Shilling per Gallon from the Tun.



C H A P. IX.

The Country or private way of Brewing.

SEVERAL Countries have their several Methods of Brewing, as is practised in *Wales, Dorchester, Nottingham, Oundle*, and many other Places; but evading Particulars, I shall here recommend that which I think is most serviceable both in Country and *London* private Families. And first, I shall observe that the great Brewer has some advantages in Brewing more than the small one, and yet the latter has some Conveniencies which the former can't enjoy; for 'tis certain that the great Brewer can make more Drink and draw a greater Length in proportion to his Malt, than a Person can from a lesser Quantity, because the greater the Body, the more is its united Power in receiving and discharging, and he can Brew with less charge and trouble by means of his more convenient Utenfils. But then the private Brewer is not without his Benefits;

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fits; for he can have his Malt ground at pleasure, his Tubs and moveable Coolers sweeter and better clean'd than the great fixed Tuns and Backs, he can skim off his top Yeast and leave his bottom Lees behind, which is what the great Brewer can't so well do; he can at discretion make additions of cold wort to his too forward Ales and Beers, which the great Brewer can't so conveniently do; he can Brew how and when he pleases, which the great ones are in some measure hindered from. But to come nearer the matter, I will suppose a private Family to Brew five Bushels of Malt, whose Copper holds brim-full thirty six Gallons or a Barrel: On this water we put half a Peck of Bran or Malt when it is something hot, which will much forward it by keep-
in the Steams or Spirit of the water, and when it begins to Boil, if the water is foul, skim off the Bran or Malt and give it the Hogs, or else lade both water and that into the mash Vat, where it is to remain till the steam is near spent, and you can see your Face in it, which will be in about a quarter of an Hour in cold weather; then let all but half a Bushel of the Malt run very leisurely into it, stirring it all the while with an Oar or Paddle, that it may not Ball, and when the Malt is
all

all but just mix'd with water it is enough, which I am sensible is different from the old way and the general present Practice; but I shall here clear that Point. For by not stirring or mashing the Malt into a Pudding Consistence or thin Mash, the Body of it lies in a more loose Condition, that will easier and sooner admit of a quicker and more true Passage of the after-ladings of the several Bowls or Jets of hot water, which must run thorough it before the Brewing is ended; by which free percolation the water has ready access to all the parts of the broken Malt, so that the Brewer is capacitated to Brew quicker or slower, and to make more Ale or small Beer; If more Ale, then hot Boiling water must be laded over so slow that one Bowl must run almost off before another is put over, which will occasion the whole Brewing to last about sixteen Hours, especially if the *Oundle* way is followed, of spending it out of the Tap as small as a Straw, and as fine as Sack, and then it will be quickly so in the Barrel: Or if less or weaker Ale is to be made and good small Beer, then the second Copper of boiling water may be put over expeditiously and drawn out with a large and fast steam. After the first stirring of the Malt is done, then
put

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put over the reserve of half a Bushel of fresh Malt to the four Bushels and half that is already in the Tub, which must be spread all over it, and also cover the top of the Tub with some Sacks or other Cloths to keep in the Steam or Spirit of the Malt; then let it stand two or three Hours, at the end of which, put over now and then a Bowl of the boiling water in the Copper as is before directed; and so continue to do till as much is run off as will almost fill the Copper; then in a Canvas or other loose woven Cloth, put in half a Pound of Hops and boil them half an Hour, when they must be taken out, and as many fresh ones put in their room as is judged proper to boil half an Hour more, if for Ale: But if for keeping Beer, half a Pound of fresh ones should be put in at every half Hour's end, and Boil an Hour and a half briskly: Now while the first Copper of wort is Boiling, there should be scalding water leisurely put over the Goods, Bowl by Bowl, and run off, that the Copper may be fill'd again immediately after the first is out, and boiled an Hour with near the same quantity of fresh Hops, and in the same manner as those in the first Copper of Ale-wort were. The rest for small Beer may be all cold water put over the
Grains

Grains at once, or at twice, and Boil'd an Hour each Copper with the Hops that has been boil'd before. But here I must observe, that sometimes I have not an opportunity to get hot water for making all my second Copper of wort, which obliges me then to make use of cold to supply what was wanting. Out of five Bushels of Malt, I generally make a Hogshead of Ale with the two first Coppers of wort, and a Hogshead of small Beer with the other two, but this more or less according to please me, always taking Care to let each Copper of wort be strained off thro' a Sieve, and cool in four or five Tubs to prevent its foxing. Thus I have brewed many Hogsheads of midling Ale, that when the Malt is good, has proved strong enough for myself and satisfactory to my friends: But for strong keeping Beer, the first Copper of wort may be wholly put to that use, and all the rest small Beer: Or when the first Copper of wort is intirely made use of for strong Beer, the Goods may be help'd with more fresh Malt (according to the *London* Fashion) and water lukewarm put over at first with the Bowl, but soon after sharp or boiling water, which may make a Copper of good Ale, and small Beer after that. In some Parts of the North, they

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they take one or more Cinders red hot and throw some Salt on them to overcome the Sulphur of the Coal, and then directly thrust it into the fresh Malt or Goods, where it lies till all the water is laded over and the Brewing done, for there is only one or two mashings or stirrings at most necessary in a Brewing: Others that Brew with Wood will quench one or more Brands ends of Ash in a Copper of wort, to mellow the Drink as a burnt Toast of Bread does a Pot of Beer; but it is to be observed, that this must not be done with Oak, Firr, or any other strong-scented Wood, lest it does more harm than good.

Another Way.

When small Beer is not wanted, and another Brewing is soon to succeed the former, then may the last small Beer wort, that has had no Hops boiled in it, remain in the Copper all Night, which will prevent its foxing, and be ready to boil instead of so much water to put over the next fresh Malt: This will greatly contribute to the strengthening, bettering and colouring of the next wort, and is commonly used in this manner when Stout or *October Beer* is to be made, not
that

that it is less serviceable if it was for Ale, or Intire Guile small Beer; but lest it should taste of the Copper by remaining all Night in it, it may be dispersed into Tubs and kept a Week or more together if some fresh cold water is daily added to it, and may be brewed as I have mentioned, taking particular Care in this as well as in the former ways to return two, three, or more Hand-bowls of wort into the Mash Tub, that first of all runs off, till it comes absolutely fine and clear, and then it may spend away or run off for good: Others will reserve this small Beer wort unboiled in Tubs, and keep it there a Week in Winter, or two or three Days in Summer, according to Conveniency, by putting fresh water every Day to it, and use it instead of water for the first Mash, alledging it is better so than boiled, because by that it is thickened and will cause the wort to run foul; this may be a Benefit to a Victualler that Brews to Sell again, and can't Vent his small Beer; because for such small raw wort that is mix'd with any water, there is no Excise to be pay'd.

50 *The Nature of the Barley-Corn,*

For Brewing Intire Guile small Beer.

There can be no way better for making good small Beer, than by Brewing it from fresh Malt, because in Malt as well as in Hops, and so in all other Vegetables, there is a Spirituous and Earthy part, as I shall further enlarge on in writing of the Hop; therefore all Drink brewed from Goods or Grains after the first or second worts are run off, is not so good and wholesome, as that intirely brewed from fresh Malt, nor could any thing but Necessity cause me to make use of such Liquor; yet how many thousands are there in this Nation that know nothing of the matter, tho' it is of no small Importance, and ought to be regarded by all those that value their Health and Taste. And here I advertise every one who reads or hears this, and is capable of being his own Friend, so far to mind this *Item*, and prefer that small Beer which is made entirely from fresh Malt, before any other that is brewed after strong Beer or Ale. Now to brew such Guile small Beer after the boiling water has stood in the Tub till it is clear, put in the Malt leisurely, and mash it that it does not Ball or Clot, then throw over some fresh Malt on the
Top,

Top, and Cloths over that, and let it stand two Hours before it is drawn off, the next water may be between hot and cold, the next boiling hot, and the next Cold; or if conveniency allows not, there may be once scalding water, and all the rest cold instead of the last three. Thus I brew my Intire Guile small Beer, by putting the first and last worts together, allowing half, or a Pound of Hops to a Hogshead and boiling it one Hour, but if the Hops were shifted twice in that time, the Drink would plainly discover the benefit. Sometimes, when I have been in haste for small Beer, I have put half a Bushel of Malt and a few Hops into my Barrel-Copper, and boil'd a Kettle gallop as some call it an Hour, and made me a present Drink, till I had more leisure to brew better.

A particular way of Brewing strong October Beer.

There was a Man in this Country that brewed for a Gentleman constantly after a very precise Method, and that was, as soon as he had put over all his first Copper of water and mash'd it some time, he would directly let the Cock run a small stream and presently put some fresh Malt

52 *The Nature of the Barley-Corn,*

on the former, and mash on the while the Cock was spending, which he would put again over the Malt, as often as his Pail or Hand-bowl was full, and this for an Hour or two together; then he would let it run off intirely, and put it over at once, to run off again as small as a Straw. This was for his *October Beer*: Then he would put scalding water over the Goods at once, but not mash, and Cap them with more fresh Malt that stood an Hour undisturbed before he would draw it off for Ale; the rest was hot water put over the Goods and mash'd at twice for small Beer: And it was observed that his *October Beer* was the most famous in the Country, but his Grains good for little, for that he had by this method wash'd out all or most of their goodness; this Man was a long while in Brewing, and once his Beer did not work in the Barrel for a Month in a very hard Frost, yet when the weather broke it recovered and fermented well, and afterwards proved very good Drink, but he seldom work'd his Beer less than a Week in the Vat, and was never tapp'd under three Years.

This way indeed is attended with extraordinary Labour and Time, by the Brewers running off the wort almost continually, and often returning the same
again

again into the mash Vat, but then it certainly gives him an opportunity of extracting and washing out the goodness of the Malt, more than any of the common Methods, by which he is capacitated to make his *October* or *March* Beer as strong as he pleases. The Fame of *Penly October* Beer is at this time well known not only throughout *Hertfordshire*, but several other remote Places, and truly not without desert, for in all my Travels I never met with any that excell'd it, for a clear amber Colour, a fine relish, and a light warm digestion. But what excell'd all was the generosity of its Donor, who for Hospitality in his Viands and this *October* Beer, has left but few of his Fellows. I remember his usual Expression to be, You are welcome to a good Batch of my *October*, and true it was, that he proved his Words by his Deeds, for not only the rich but even the poor Man's Heart was generally made glad, even in advance, whenever they had Business at *Penly*, as expecting a refreshment of this Cordial Malt Liquor, that often was accompany'd with a good Breakfast or Dinner besides, while several others that had greater Estates would seem generous by giving a Yeoman Man Neighbour, the Ma-

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thematical Treat of a look on the Spit,
and a standing Drink at the Tap.

Of Brewing Molosses Beer.

Molosses or Treacle has certainly been formerly made too much use of in the brewing of Stout Beer, common Butt Beers, brown Ales and small Beer when Malts have been dear : But it is now prohibited under the Penalty of fifty Pounds for every ten Pounds weight found in any common Brewhouse, and as Malts are now about twenty Shillings *per* Quarter, and like to be so by the Blessing of God, and the Assistance of that invaluable excellent Liquor for steeping Seed Barley in, published in a late Book intitled, *Chiltern and Vale Farming Explained* : There is no great danger of that Imposition being rise again, which in my Opinion was very unwholsome, because the Brewer was obliged to put such a large quantity of Treacle into his water or small wort to make it strong Beer or Ale, as very probably raised a sweating in some degree in the Body of the drinker : Tho' in small Beer a lesser quantity will serve ; and therefore I have known some to brew it in that for their Health's sake, because this does not breed the
Scurvy

Scurvy like Malt-liquors, and at the same time will keep open the Pipes and Passages of the Lungs and Stomach, for which purpose they put in nine Pounds weight into a Barrel-Copper of cold water, first mixing it well, and boiling it briskly with a quarter of a Pound of Hops or more one Hour, so that it may come off twenty seven Gallons.

A Method practised by a Victualler for Brewing of Ale or October Beer from Nottingham.

His Copper holds twenty four Gallons, and the Mash Tub has room enough for four and more Bushels of Malt. The first full Copper of boiling water he puts into the Mash Tub, there to lye a quarter of an Hour, till the steam is so far spent, that he can see his Face in it, or as soon as the hot water is put in, throws a Pail or two of cold water into it, which will bring it at once into a temper; then he lets three Bushels of Malt be run leisurely into it, and stirred or mash'd all the while, but as little as can be, or no more than just to keep the Malt from clotting or balling; when that is done, he puts one Bushel of dry Malt on the Top to keep in the Vapour or Spirit, and so

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lets it stand covered two Hours, or till the next Copper full of water is boiled hot, which he lades over the Malt or Goods three Hand-bowls full at a time, that are to run off at the Cock or Tap by a very small stream before more is put on, which again must be returned into the Mash Tub till it comes off exceeding fine, for unless the wort is clear when it goes into the Copper, there are little hopes it will be so in the Barrel, which leisure way obliges him to be sixteen Hours in brewing these four Bushels of Malt. Now between the ladings over he puts cold water into the Copper to be boiling hot, while the other is running off; by this means his Copper is kept up near full, and the Cock spending to the end of brewing his Ale or small Beer, of which only twenty one Gallons must be saved of the first wort that is reserved in a Tub, wherein four Ounces of Hops are put and then it is to be set by. For the second wort I will suppose there are twenty Gallons of water in the Copper boiling hot, that must be all laded over in the same manner as the former was, but no cold water need here be mixed; when half of this is run out into a Tub, it must be directly put into the Copper with half of the first wort, strain'd thro' the Brew-
ing

ing Sieve as it lies on a small loose wooden Frame over the Copper, to keep back those Hops that were first put in to preserve it, which is to make the first Copper twenty one Gallons; then upon its beginning to boil he puts in a Pound of Hops in one or two Canvas or other coarse Linnen Bags, somewhat larger than will just contain the Hops, that an allowance may be given for their swell; this he boils away very briskly for half an Hour, when he takes the Hops out and continues boiling the wort by itself till it breaks into Particles a little ragged, and then it is enough and must be dispers'd into the cooling Tubs very thin: Then put the remainder of the first and second wort together and boil that, the same time, in the same manner, and with the same quantity of fresh Hops the first was. The rest of the third or small Beer wort will be about fifteen or twenty Gallons more or less, he mixes directly with some cold water to keep it free of Excise, and puts it into the Copper as the first Liquor to begin a second Brewing of Ale with another four Bushels of Malt as he did before, and so on for several Days together if necessary; but at last there may be some small Beer made, tho' some will
make

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make none, because the Goods or Grains
will go the further in feeding of Hogs.

Observations on the foregoing Method.

The first Copper of twenty four Gallons of water is but sufficient to wet three Bushels of Malt, and by the additions of cold water as the hot is expended, it matters not how much the Malt drinks up: Tho' a third part of water is generally allowed for that purpose that is never returned.

By the leisure putting over the Bowls of water, the goodness of the Malt is the more extracted and washed out, so that more Ale may be this way made and less small Beer, than if the wort was drawed out hastily; besides the wort has a greater opportunity of coming off finer by a slow stream than by a quicker one, which makes this Method excel all others that discharge the wort out of the Mash Tub more hastily. Also by the continual running of the Cock or Tap, the Goods or Grains are out of danger of sowing, which often happens in Summer Brewings, especially when the Cock is stopt between the several boilings of the wort, and what has been the very Cause of
damaging

damaging or spoiling many Guiles of Drink.

This Brewer reposes such a Confidence in the Hops to preserve the wort from fixing even in the very hottest time in Summer, that he puts all his first running into one Tub, till he has an opportunity of boiling it, and when Tubs and Room are so scarce that the wort is obliged to be laid thick to cool, then the security of some fresh Hops (and not them already boiled or soak'd) may be put into it, which may be got out again by letting the Drink run thro' the Cullender, and after that a Hair Sieve to keep the Seeds of the Hop back as the Drink goes into the Barrel: But this way of putting Hops into the cooling Tubs is only meant where there is a perfect Necessity, and Tubs and Room enough can't be had to lay the wort thin.

By this Method of Brewing, Ale may be made as strong or as small as is thought fit, and so may the small Beer that comes after, and is so agreeable that this Brewer makes his Ale and strong keeping *October* Beer, all one and the same way, only with this Difference, that the latter is stronger and more hopp'd than the former. Where little or no small Beer is wanted, there may little or none be Brewed, according

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according to this manner of working, which is no small Conveniency to a little Family that uses more strong than small, nor is there any Loss by leaving the Grains in some Heart, where Horse, Cows, Hogs, or Rabbits are kept.

I am very sensible that the Vulgar Error for many Years, has been a standard Sign to the ignorant of boiling strong Worts only till they break or curdle in the Copper, which sometimes will be in three quarters of an Hour, or in an Hour or more, according to the nature of the Malt and Water; but from these in some measure I dissent, and also from those that boil it two or three Hours, for it is certain the longer worts boil, the thicker they are made, because the watry or thin parts evaporate first away, and the thicker any Drink is boiled, the longer it requires to lye in the Barrel to have its Particles broke, which Age must be then the sole cause of, and therefore I have fixed the time and sign to know when the wort is truly enough, and that in such a manner that an ordinary Capacity may be a true judge of, which hereafter will prevent prodigious Losses in the waste of strong worts that have often been boiled away to greater Loss than Profit.

I have

I have here also made known, I think, the true Method of managing the Hop in the Copper, which has long wanted adjusting, to prevent the great damage that longer boilings of them has been the sole occasion of to the spoiling of most of our malt Drinks brewed in this Nation.



C H A P. X.

The Nature and Use of the Hop.

THIS Vegetable has suffered its degradation, and raised its Reputation on the most of any other. It formerly being thought an unwholesome Ingredient, and till of late a great breeder of the Stone in the Bladder, but now that fallacious Notion is obviated by Dr. *Quincy* and others, who have proved that Malt Drink much tinctured by the Hop, is less prone to do that mischief, than Ale that has fewer boiled in it. Indeed when the Hop in a dear time is adulterated with water, in which Aloes, &c. have been infused, as was practised it is said about eight Years ago to make the old ones recover

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cover their bitterness and seem new, then they are to be looked on as unwholesome; but the pure new Hop is surely of a healthful Nature, composed of a spirituous flowery part, and a phlegmatick terrene part, and with the best of the Hops I can either make or mar the Brewing, for if the Hops are boiled in strong or small worts beyond their fine and pure Nature, the Liquor suffers, and will be tang'd with a noxious taste both ungrateful and unwholesome to the Stomach, and if boiled to a very great Excess, they will be apt to cause Reachings and disturb a weak Constitution. It is for these Reasons that I advise the boiling two Parcels of fresh Hops in each Copper of Ale-wort, and if there were three for keeping Beer, it would be so much the better for the taste, health of Body, and longer Preservation of the Beer in a sound smooth Condition. And according to this, one of my Neighbours made a Bag like a Pillow-bear of the ordinary fixpenny yard Cloth, and boil'd his Hops in it half an Hour, then he took them out, and put in another Bag of the like quantity of fresh Hops and boiled them half an Hour more, by which means he had an opportunity of boiling both Wort and Hops their due time, sav'd himself the trouble

trouble of straining them thro' a Sieve, and secured the Seeds of the Hops at the same time from mixing with the Drink, afterwards he boiled the same Bags in his small Beer till he got the goodness of it out, but observe that the Bags were made bigger than what would just contain the Hops, otherwise it will be difficult to boil out their goodness. It's true, that here is a Charge encreased by the Consumption of a greater quantity of Hops than usual, but then how greatly will they answer the desired end of enjoying fine palated wholesome Drink, that in a cheap time will not amount to much if bought at the best Hand; and if we consider their after-use and benefit in small Beer, there is not any loss at all in their Quantity: But where it can be afforded, the very small Beer would be much improved if fresh Hops were also shifted in the boiling of this as well as the stronger worts, and then it would be neighbourly Charity to give them away to the poorer Person. Hence may appear the Hardship that many are under of being necessitated to drink of those Brewers Malt Liquors, who out of avarice boil their Hops to the last, that they may not lose any of their quintessence: Nay, I have known some of the little Victualling Brew-
ers

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ers so stupendiously ignorant, that they have thought they acted the good Husband, when they have squeezed the Hops after they have been boiled to the last in small Beer, to get out all their goodness as they vainly imagin'd, which is so reverse to good management, that in my Opinion they had much better put some sort of Earth into the Drink, and it would prove more pleasant and wholesome. And why the small Beer should be in this manner (as I may justly call it) spoiled for want of the trifling Charge of a few fresh Hops, I am a little surprized at, since it is the most general Liquor of Families, and therefore as great Care is due to it as any in its Brewing, to enjoy it in a pure and wholesome Order.

After the Wort is cooled and put into the working Vat or Tub, some have thrown fresh Hops into it, and work'd them with the Yeast, at the same time reserving a few Gallons of raw Wort to wash the Yeast thro' a Sieve to keep back the Hop. This is a good way where Hops enough have not been sufficiently boiled in the Wort, or to preserve it in the Coolers where it is laid thick, otherwise I think it needless.

When Hops have been dear, many have used the Seeds of Wormwood, that they

they buy in the *London* Seed Shops instead of them: Others *Daucus* or wild Carrot Seed, that grows in our common Fields, which many of the poor People in this Country gather and dry in their Houses against their wanting of them: Others that wholesome Herb *Horehound*, which indeed is a fine Bitter and grows on several of our Commons.

But before I conclude this Article, I shall take notice of a Country Bite, as I have already done of a *London* one, and that is, of an Arch Fellow that went about to Brew for People, and took his opportunity to save all the used Hops that were to be thrown away, these he washed clean, then would dry them in the Sun, or by the Fire, and sprinkle the juice of *Horehound* on them, which would give them such a greenish colour and bitterish taste, that with the help of the Screw-press he would sell them for new Hops.

Hops in themselves are known to be a subtil grateful Bitter, whose Particles are Active and Rigid, by which the viscid ramous parts of the Malt are much divided, that makes the Drink easy of Digestion in the Body; they also keep it from running into such Cohesions as would make it ropy, valid and sour, and therefore are not only of great use in boiled,
F but

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but in raw worts to preserve them sound till they can be put into the Copper, and afterwards in the Tun while the Drink is working, as I have before hinted.

Here then I must observe, that the worser earthy part of the Hop is greatly the cause of that rough, harsh unpleasant taste, which accompany both Ales and Beers that have the Hops so long boiled in them as to tincture their worts with their mischievous Effects; for notwithstanding the Malt, be ever so good, the Hops, if boiled too long in them, will be so predominant as to cause a nasty bad taste, and therefore I am in hopes our Malt Liquors in general will be in great Perfection, when Hops are made use of according to my Directions, and also that more Grounds will be planted with this most serviceable Vegetable than ever, that their Dearness may not be a discouragement to this excellent Practice.

For I know an Alehouse-keeper and Brewer, who, to save the expence of Hops that were then two Shillings *per* Pound, use but a quartern instead of a Pound, the rest he supplied with *Daucus* Seeds; but to be more particular, in a Mug of this Person's Ale I discovered three several Impositions. *First*, He underboil'd his

his Wort to save its Consumption. *Secondly*, He boiled this Seed instead of the Hop; and *Thirdly*, He beat the Yeast in for some time to encrease the strength of the Drink; and all these in such a *Legerdemain* manner as gull'd and infatuated the ignorant Drinker to such a degree as not to suspect the Fraud, and that for these three Reasons: *First*, The under boil'd wort being of a more sweet taste than ordinary, was esteemed the Produce of a great allowance of Malt. *Secondly*, The *Daucus* Seed encreased their approbation by the fine Peach flavour or relish that it gives the Drink; and *Thirdly*, The Yeast was not so much as thought of, since they enjoyed a strong heady Liquor. These artificial Qualities, and I think I may say unnatural, has been so prevalent with the Vulgar, who were his chief Customers, that I have known this Victualler have more Trade for such Drink than his Neighbours, who had much more wholesome at the same time; for the *Daucus* Seed, tho' it is a Carminative, and has some other good Properties, yet in the unboil'd Wort it is not capable of doing the Office of the Hop, in breaking thro' the clammy parts of it; the Hop being full of subtil penetrating Qualities, a Strengthenener of the Stomach, and makes the Drink

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agreeable, by opposing Obstructions of the
Viscera, and particularly of the Liver and
Kidneys, as the Learned maintain, which
confutes the old Notion, that Hops are a
Breeder of the Stone in the Bladder.



C H A P. XI.

Of Boiling Malt Liquors.

ALTHO' I have said an Hour and a
half is requisite for boiling *October*
Beer, and an Hour for Ales and small
Beer; yet it is to be observed, that an ex-
act time is not altogether a certain Rule
in this Case with some Brewers; for when
loose Hops are boiled in the wort so long
till they all sink, their Seeds will arise
and fall down again; the wort also will
be curdled, and broke into small Parti-
cles if examin'd in a Hand-bowl, but af-
terwards into larger, as big as great Pins
heads, and will appear clean and fine at
the Top. This is so much a Rule with
some, that they regard not Time, but this
Sign to shew when the Wort is boiled
enough; and this will happen sooner or
later according to the Nature of the Bar-
ley.

ley and its being well Malted; for if it comes off Chalks or Gravels, it generally has the good Property of breaking or curdling soon; but if of tough Clays, then it is longer, which by some Persons is not a little valued, because it saves time in boiling, and consequently the Consumption of the Wort.

It is also to be observed, that pale Malt Worts will not break so soon in the Copper, as the brown Sorts, but when either of their Worts boil, it should be to the purpose, for then they will break sooner and waste less than if they are kept Simmering, and will likewise work more kindly in the Tun, drink smoother, and keep longer.

Now all Malt Worts may be spoiled by too little or too much boiling; if too little, then the Drink will always taste raw, mawkish, and be unwholesome in the Stomach, where, instead of helping to dilute and digest our Food, it will cause Obstructions, Colicks, Head-achs, and other misfortunes; besides, all such underboil'd Drinks are certainly exposed to staleness and sowerness, much sooner than those that have had their full time in the Copper. And if they are boiled too long, they will then thicken (for one may boil a Wort to a Salve) and not come out of

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the Copper fine and in a right Condition, which will cause it never to be right clear in the Barrel; an *Item* sufficient to shew the mistake of all those that think to excel in Malt Liquors, by boiling them two or three Hours, to the great Confusion of the Wort, and doing more harm than good to the Drink.

But to be more particular in those two Extrems, it is my Opinion, as I have said before, that no Ale Worts boiled less than an Hour can be good, because in an Hour's time they cannot acquire a thickness of Body any ways detrimental to them, and in less than an Hour the ramous viscid parts of the Ale cannot be sufficiently broke and divided, so as to prevent it running into Cohesions, Ropyness and Sowerness, because in Ales there are not Hops enough allowed to do this, which good boiling must in a great measure supply, or else such Drink I am sure can never be agreeable to the Body of Man; for then its cohesive Parts being not thoroughly broke and comminuted by time and boiling, remains in a hard texture of Parts, which consequently obliges the Stomach to work more than ordinary to digest and secrete such parboil'd Liquor, that time and fire should have cured before: Is not this apparent in half boil'd Meats, or under-

der-bak'd Bread, that often causes the Stomach a great fatigue to digest, especially in those of a sedentary Life; and if that suffers, 'tis certain the whole Body must share in it: How ignorant then are those People, who, in tipling of such Liquor, can praise it for excellent good Ale, as I have been an eye-witness of, and only because its taste is sweetish, (which is the nature of such raw Drinks) as believing it to be the pure Effects of the genuine Malt, not perceiving the Landlord's Avarice and Cunning to save the Consumption of his Wort by shortness of boiling, tho' to the great Prejudice of the Drinker's Health; and because a Liquid does not afford such a plain ocular Demonstration, as Meat and Bread does, these deluded People are taken into an Approbation of indeed an *Ignis fatuus*, or what is not.

To come then to the *Crisis* of the Matter, both Time and the Curdling or Breaking of the Wort should be consulted; for if a Person was to boil the Wort an Hour, and then take it out of the Copper, before it was rightly broke, it would be wrong management, and the Drink would not be fine nor wholesome; and if it should boil an Hour and a half, or two Hours, without regarding when its Particles are

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in a right order, then it may be too thick, so that due Care must be had to the two extrems to obtain it its due order; therefore in *October* and keeping Beers, an Hour and a quarter's good boiling is commonly sufficient to have a thorough cured Drink, for generally in that time it will break and boil enough, and because in this there is a double Security by length of boiling, and a quantity of Hops shifted; but in the new way there is only a single one, and that is by a double or treble allowance of fresh Hops boiled only half an Hour in the Wort, and for this Practice a Reason is assigned, that the Hops being endowed with discutient aperitive Qualities, will by them and their great quantity supply the Defect of underboiling the Wort; and that a further Conveniency is here enjoyed by having only the fine wholesome strong flowery spirituous Parts of the Hop in the Drink, exclusive of the phlegmatick nasty earthy Parts which would be extracted if the Hops were to be boiled above half an Hour; and therefore there are many now, that are so attach'd to this new Method, that they won't brew Ale or *October* Beer any other way, vouching it to be a true Tenet, that if Hops are boiled above thir-

ty Minutes, the wort will have some or more of their worser Quality.

The allowance of Hops for Ale or Beer, cannot be exactly adjusted without coming to Particulars, because the Proportion should be according to the nature and quality of the Malt, the Season of the Year it is brew'd in, and the length of time it is to be kept.

For strong brown Ale brew'd in any of the Winter Months, and boiled an Hour, one Pound is but barely sufficient for a Hogshead, if it be Tapp'd in three Weeks or a Month.

If for pale Ale brewed at that time and for that Age, one Pound and a quarter of Hops; but if these Ales are brewed in any of the Summer Months, there should be more Hops allowed.

For *October* or *March* brown Beer, a Hogshead made from Eleven Bushels of Malt, boiled an Hour and a quarter to be kept Nine Months, three Pounds and a half ought to be boiled in such Drink at the least.

For *October* or *March*, pale Beer made from fourteen Bushels, boiled an Hour and a quarter, and kept Twelve Months, six Pound ought to be allowed to a Hogshead of such Drink, and more if the Hops are

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are shifted in two Bags, and less time given the Wort to boil.

Now those that are of Opinion, that their Beer and Ales are greatly improved by boiling the Hops only half an Hour in the Wort, I joyn in Sentiment with them, as being very sure by repeated Experience it is so, but I must here take leave to dissent from those that think that half an Hour's boiling the Wort is full enough for making right sound and well relished Malt Drinks; however of this I have amply and more particularly wrote in my Second Book of Brewing in Chapter IV, where I have plainly publish'd the true Sign or Criterion to know when the Wort is boiled just enough, and which I intend to publish in a little time,



C H A P. XII.

Of Foxing or Tainting Malt Liquors.

FOXING is a misfortune, or rather a Disease in Malt Drinks, occasioned by divers Means, as the Nastiness of the Utensils, putting the Worts too thick together in the Backs or Cooler, Brewing too

too often and soon one after another, and sometimes by bad Malts and Waters, and the Liquors taken in wrong Heats, being of such pernicious Consequence to the great Brewer in particular, that he sometimes cannot recover and bring his Matters into a right Order again under a Week or two, and is so hateful to him in its very Name, that it is a general Law among them to make all Servants that Name the word *Fox* or *Foxing* in the Brewhouse to pay Sixpence, which obliges them to call it *Reynards*; for when once the Drink is Tainted, it may be smelt at some Distance somewhat like a *Fox*; It chiefly happens in hot weather, and causes the Beer and Ale so Tainted to acquire a fulsome sickish taste, that will if it is received in a great degree become Ropy like Treacle, and in some short time turn Sour. This I have known so to surprize my small Beer Customers, that they have asked the Drayman what was the matter: He to act in his Master's Interest tells them a Lye, and says it is the goodness of the Malt that causes that sweetish-mawkish taste, and then would brag at Home how cleverly he came off, I have had it also in the Country more than once, and that by the idleness and ignorance of my Servant, who when a
Tub

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Tub has been rinsed out only with fair Water, has set it by for a clean one, but this won't do with a careful Master, for I oblige him to clean the Tub with a Hand-brush, Ashes, or Sand every Brewing, and so that I cannot scrape any Dirt up under my Nail. However as the Cure of this Disease has baffled the Efforts of many, I have been tempted to endeavour the finding out a Remedy for the great Malignity, and shall deliver the best I know on this Score.

And here I shall mention the great Value of the Hop in preventing and curing the Fox in Malt Liquors. When the Wort is run into the Tub out of the mashing Vat, it is a very good way to throw some Hops directly into it before it is put into the Copper, and they will secure it against Sourness and Ropyness, that are the two Effects of fox'd Worts or Drinks, and is of such Power in this respect, that raw Worts may be kept some time, even in hot weather, before they are boiled, and which is necessary where there is a large Quantity of Malt used to a little Copper; but it is certain that the stronger Worts will keep longer with Hops than the smaller Sorts: So likewise if a Person has fewer Tubs than is wanting, and he is apprehensive his Worts will be Fox'd by
too

too thick lying in the Coolers or working
Tubs, then it will be a safe way to put
some fresh Hops into such Tubs and work
them with the Yeast as I have before
hinted; or in case the Drink is already
Foxed in the Fat or Tun, new Hops
should be put in and work'd with it, and
they will greatly fetch it again into a right
Order; but then such Drink should be
carefully taken clear off from its gross
nasty Lee, which being mostly Tainted,
would otherwise lye in the Barrel, cor-
rupt and make it worse.

Some will sift quick Lime into foxed
Drinks while they are working in the
Tun or Vat, that its Fire and Salts may
break the Cohesions of the Beer or Ale,
and burn away the stench, that the Cor-
ruption would always cause; but then
such Drink should by a Peg at the bot-
tom of the Vat be drawn off as fine as
possible, and the Dregs left behind.

There are many that do not con-
ceive how their Drinks become Fox'd
and Tainted for several Brewings toge-
ther; but I have in Chapter VI, in my
Second Book, made it appear, that the
Taint is chiefly retain'd and lodged in the
upright wooden Pins that fasten the
Planks to the Joists, and how scalding
Lye is a very efficacious Liquor to extir-
pate

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pate it out of the Utenfils in a little
time if rightly applied; and one other
most powerful Ingredient that is now used
by the greatest Artists for curing of the
same.



C H A P. XIII.

*Of fermenting and working of Beers and
Ales, and the pernicious Practice of
Beating in the Yeast detected.*

THIS Subject in my Opinion has
long wanted a Satyrical Pen to
shew the ill Effects of this unwholesome
Method, which I suppose has been much
discouraged and hindered hitherto, from
the general use it has been under many
Years, especially by the *Northern* Brew-
ers, who tho' much famed for their Know-
ledge in this Art, and have induced many
others by their Example in the *Southern*
and other Parts to pursue their Method;
yet I shall endeavour to prove them cul-
pable of Male-practice, that beat in the
Yeast, as some of them have done a Week
together; and that Custom ought not to
Autho-

Authorize an ill Practice. *First*, I shall observe that Yeast is a very strong acid, that abounds with subtil spirituous Qualities, whose Particles being wrapped up in those that are viscid, are by a mixture with them in the Wort, brought into an intestine Motion, occasion'd by Particles of different Gravities; for as the spirituous Parts of the Wort will be continually striving to get up to the Surface, the glutinous adhesive ones of the Yeast will be as constant in retarding their ascent, and so prevent their Escape; by which the spirituous Particles are set loose and free from their viscid Confinements, as may appear by the Froth on the Top, and to this end a moderate warmth hastens the Operation, as it assists in opening the viscidities in which some spirituous Parts may be entangled, and unbends the Spring of the included Air: The viscid Parts which are raised to the Top, not only on account of their own lightness, but by the continual efforts and excursions of the Spirits to get uppermost, shew when the ferment is at the highest, and prevent the finer Spirits making their escape; but if this intestine Operation is permitted to continue too long, a great deal will get away, and the remaining grow flat and vapid, as Dr. *Quincy* well observes.

Now

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Now tho' a small quantity of Yeast is necessary to break the Band of Corruption in the Wort, yet it is in itself of a poisonous Nature, as many other Acids are; for if a Plaister of thick Yeast be applied to the Wrist as some have done for an Ague; it will there raise little Pustles or Blisters in some degree like that Venomous! (As I have just reason in a particular Sense to call it) Ingredient *Cantharides*, which is one of the Shop Poisons. Here then I shall observe, that I have known several beat the Yeast into the Wort for a Week or more together to improve it, or in plainer terms to load the Wort with its weighty and strong spirituous Particles; and that for two Reasons, *First*, Because it will make the Liquor so heady, that five Bushels of Malt may be equal in strength to six, and that by the stupifying Narcotick Qualities of the Yeast; which mercenary subtilty and imposition has so prevailed to my Knowledge with the Vulgar and Ignorant, that it has caused many of them to return the next Day to the same Alehouse, as believing they had stronger and better Drink than others: But alas, how are such deceived that know no other than that it is the pure Product of the Malt, when at the same time they are driving Nails into
their

their Coffins, by impregnating their Blood with the corrupt Qualities of this poisonous acid, as many of its Drinkers have proved, by suffering violent Head-achs, loss of Appetite, and other Inconveniences the Day following, and sometimes longer, after a Debauch of such Liquor; who would not perhaps for a great reward swallow a Spoonful of thick Yeast by itself, and yet without any concern may receive for ought they know several, dissolved in the Vehicle of Ale, and then the corrosive Corpuscles of the Yeast being mix'd with the Ale, cannot fail (when forsaken in the Canals of the Body of their Vehicle) to do the same mischief as they would if taken by themselves undiluted, only with this difference, that they may in this Form be carried sometimes further in the animal Frame, and so discover their malignity in some of the inmost recesses thereof, which also is the very Case of malignant Waters, as a most learned Doctor observes.

Secondly, They alledge for beating the Yeast into Wort, that it gives it a fine tang or relish, or as they call it at *London*, it makes the Ale bite of the Yeast; but this flourish indeed is for no other reason than to further its Sale, and tho' it may be agreeable to some Bigots, to

82 *The Nature of the Barley-Corn,*

me it proves a discovery of the infection by its nauseous taste; however my surprize is lessen'd, when I remember the *Plymouth* People, who are quite the reverse of them at *Dover* and *Chatham*; for the first are so attach'd to their white thick Ale, that many have undone themselves by drinking it; nor is their humour much different as to the common Brewers brown Ale, who when the Customer wants a Hogshead, they immediately put in a Handful of Salt and another of Flower, and so bring it up, this is no sooner on the Stilling but often Tapp'd, that it may carry a Froth on the Top of the Pot, otherwise they despise it: The Salt commonly answered its End of causing the Tiplers to become dryer by the great Quantities they drank, that it farther excited by the biting pleasant stimulating quality the Salt strikes the Palate with. The Flower also had its seducing share by pleasing the Eye and Mouth with its mantling Froth, so that the Sailors that are often here in great Numbers used to consume many Hogsheads of this common Ale with much delight, as thinking it was intirely the pure Product of the Malt.

Their white Ale is a clear Wort made from pale Malt, and fermented with what they call ripening, which is a Compositi-
on

On, they say, of the Flower of Malt, Yeast and Whites of Eggs, a *Nostrum* made and sold only by two or three in those Parts, but the Wort is brewed and the Ale vend- ed by many of the Publicans, which is drank while it is fermenting in Earthen Steens, in such a thick manner as resem- bles butter'd Ale, and sold for Twopence Halfpenny the full Quart. It is often pre- scribed by Physicians to be drank by wet Nurses for the encrease of their Milk, and also as a prevalent Medicine for the Co- lick and Gravel. But the *Dover* and *Chatham* People won't drink their Butt- Beer, unless it is Aged, fine and strong.

Of working and fermenting London Stout Beer and Ale.

In my Brewhouse at *London*, the Yeast at once was put into the Tun to work the Stout Beer and Ale with, as not hav- ing the Conveniency of doing otherwise, by reason the After-worts of small Beer comes into the same Backs or Coolers where the strong Worts had just been, by this means, and the shortness of time we have to ferment our strong Drinks, we cannot make Reserves of cold Worts to mix with and check the too forward working of those Liquors, for there we brewed three times a Week through-

84 *The Nature of the Barley-Corn,*
out the Year, as most of the great ones
do in *London*, and some others five times.
The strong Beer brewed for keeping is
suffered to be Blood-warm in the Winter
when the Yeast is put into it, that it may
gradually work two Nights and a Day at
least, for this won't admit of such a hasty
Operation as the common brown Ale will,
because if it is work'd too warm and ha-
sty, such Beer won't keep near so long as
that fermented cooler. The brown Ale
has indeed its Yeast put into it in the
Evening very warm, because they carry
it away the very next Morning early to
their Customers, who commonly draw
it out in less than a Week's time. The
Pale or Amber Ales are often kept near
it, not quite a Week under a fermentati-
on, for the better incorporating the Yeast
with Wort, by beating it in several times
for the foregoing Reasons.

*Of working or fermenting Drinks brewed
by private Families.*

I mean such who Brew only for their
own use, whether it be a private Family
or a Victualler. In this Case be it for
Stout Beers, or for any of the Ales ; the
way that is used in *Northamptonshire*,
and by good Brewers elsewhere ; is, to
put

put some Yeast into a small quantity of warm Wort in a Hand-bowl, which for a little while swims on the Top, where it works out and leisurely mixes with the Wort, that is first quite cold in Summer, and almost so in Winter; for the cooler it is work'd the longer it will keep, too much Heat agitating the spirituous Particles into too quick a motion, whereby they spend themselves too fast, or fly away too soon, and then the Drink will certainly work into a blister'd Head that is never natural; but when it ferments by moderate degrees into a fine white curl'd Head, its Operation is then truly genuine, and plainly shews the right management of the Brewer. To one Hoghead of Beer, that is to be kept nine Months, I put a Quart of thick Yeast, and ferment it as cool as it will admit of, two Days together, in *October* or *March*, and if I find it works too fast, I check it at leisure by stirring in some raw Wort with a Hand-bowl: So likewise in our Country Ales we take the very same method, because of having them keep some time, and this is so nicely observed by several, that I have seen them do the very same by their small Beer Wort; now by these several Additions of raw Wort, there are as often new Commotions raised in the

86 *The Nature of the Barley-Corn,*

Beer or Ale, which cannot but contribute to the rarefaction and comminution of the whole; but whether it is by these joining Principles of the Wort and Yeast, that the Drink is rendered smoother, or that the spirituous Parts are more entangled and kept from making their Escape, I can't determine; yet sure it is, that such small Liquors generally sparkle and knit out of the Barrel as others out of a Bottle, and is as pleasant Ale as ever I drank.

Others again for Butt or Stout Beer will, when they find it works up towards a thick Yeast, mix it once and beat it in again with the Hand-bowl or Jett; and when it has work'd up a second time in such a manner, they put it into the Vessel with the Yeast on the Top and the Sediments at Bottom, taking particular Care to have some more in a Tub near the Cask to fill it up as it works over, and when it has done working, leave it with a thick Head of Yeast on to preserve it.

But for Ale that is not to be kept very long, they Hop it accordingly, and beat the Yeast in every four or five Hours for two Days successively in the warm weather, and four in the Winter till the Yeast begins to work heavy and sticks to the hollow part of the Bowl, if turned down
on

on the same, then they take all the Yeast off at Top and leave all the Dregs behind, putting only up the clear Drink, and when it is a little work'd in the Barrel, it will be fine in a few Days and ready for drinking. But this last way of beating in the Yeast too long, I think I have sufficiently detected, and hope, as it is now declining, it will never revive again, and for which reason I have in my second Book encouraged all light fermentations, as the most natural for the Malt Liquor and the human Body.

Of forwarding and retarding the fermentation of malt Liquors.

In case Beer or Ale is backward in working, it is often practised to cast some Flower out of the Dusting Box, or with the Hand over the Top of the Drink, which will become a sort of Crust or Cover to help to keep the Cold out: Others will put in one or two Ounces of powder'd Ginger, which will so heat the Wort as to bring it forward: Others will take a Gallon Stone Bottle and fill it with boiling water, which being well Cork'd, is put into the working Tub, where it will communicate a gradual Heat for some time and forward the fermentation: O-

88 *The Nature of the Barley-Corn,*

thers will reserve some raw Wort, which they heat and mix with the rest, but then due Care must be taken that the Pot in which it is heated has no manner of Grease about it lest it impedes, instead of promoting the working, and for this reason some nice Brewers will not suffer a Candle too near the Wort, lest it drop into it. But for retarding and keeping back any Drink that is too much heated in working, the cold raw Wort, as I have said before, is the most proper of any thing to check it with, tho' I have known some to put one or more Pewter Dishes into it for that purpose, or it may be broke into several other Tubs, where by its shallow lying it will be taken off its Fury. Others again, to make Drink work that is backward, will take the whites of two Eggs and beat them up with half a Quartern of good Brandy, and put it either into the working Vat, or into the Cask, and it will quickly bring it forward if a warm Cloth is put over the Bung. Others will tye up Bran in a coarse thin Cloth and put it into the Vat, where by its spongy and flowery Nature and close Bulk it will absorb a quantity of the Drink, and breed a heat to forward its working.

I know

I know an Inn-keeper of a great Town in *Bucks*, that is so curious as to take off all the top Yeast first, and then by a Peg near the bottom of his working Tub, he draws off the Beer or Ale, so that the Dreggs are by this means left behind. This I must own is very right in Ales that are to be drank soon, but in Beers that are to lye nine or twelve Months in a Butt or other Cask, there certainly will be wanted some Feces or Sediment for the Beer to feed on, else it must consequently grow hungry, sharp and eager; and therefore if its own top and bottom are not put into a Cask with the Beer, some other Artificial Composition or Lee should supply its Place, that is wholesomer, and will better feed with such Drink than its own natural Settlement, and therefore I have here inserted several curious Receipts for answering this great End.

C H A P. XIV.

Of an Artificial Lee for Stout or Stale Beer to feed on.

THIS Article, as it is of very great Importance in the curing of our malt Liquors, requires a particular regard to this last management of them, because in my Opinion the general misfortune of the Butt or keeping Beers drinking so hard and harsh, is partly owing to the nasty foul Feces that lye at the bottom of the Cask, compounded of the Sediments of Malt, Hops and Yeast, that are all Clogg'd with gross rigid Salts, which by their long lying in the Butt or other Vessel, so tinctures the Beer as to make it partake of all their raw Natures: For such is the Feed, such is the Body, as may be perceived by Eels taken out of dirty Bottoms, that are sure to have a muddy taste, when the Silver sort that are catch'd in Gravelly or Sandy clear Rivers Eat sweet and fine: Nor can this ill property be a little in those Starting (as they call it in *London*) new thick Beers that were carry'd directly from my Brew-house, and by a Leather Pipe or Spout conveyed

conveyed into the Butt as they stood in the Cellar, which I shall further demonstrate by the Example of whole Wheat, that is, by many put into such Beer to feed and preserve it, as being reckoned a substantial Alkali; however it has been proved that such Wheat in about three Years time has eat into the very Wood of the Cask, and there Hony-comb'd it by making little hollow Cavities in the Staves. Others there are that will hang a Bag of Wheat in the Vessel that it mayn't touch the Bottom, but in both Cases the Wheat is discovered to absorb and collect the saline acid qualities of the Beer, Yeast and Hop, by which it is impregnated with their sharp qualities, as a Toast of Bread is put into Punch or Beer, whose alcalous hollow Nature will attract and make a Lodgment of the acid strong Particles in either, as is proved by eating the inebriating Toast, and therefore the *Frenchman* says, the *English* are right in putting a Toast into the Liquor, but are Fools for eating it: Hence it is that such whole Wheat is loaded with the qualities of the unwholsome Settlements or Grounds of the Beer, and becomes of such a corroding Nature, as to do this mischief; and for that reason, some in the *North* will hang a Bag of the Flower of malted Oats, Wheat, Pease

92 *The Nature of the Barley-Corn,*
Pease and Beans in the Vessels of Beer,
as being a lighter and mellow Body
than whole Wheat or its Flower, and
more natural to the Liquor: But whe-
ther it be raw Wheat or Malted, it is
supposed, after this receptacle has emitted
its alcalous Properties to the Beer, and
taken in all it can of the acid qualities
thereof, that such Beer will by length of
Age prey upon that again, and so com-
municate its pernicious Effects to the Bo-
dy of Man, as Experience seems to jus-
tify by the many sad Examples that I
have seen in the Destruction of several
lusty Brewers Servants, who formerly
scorn'd what they then called Flux Ale,
to the preference of such corroding con-
suming Stale Beers; and therefore I have
hereafter advised that such Butt or keep-
ing Beers be Tapp'd at nine or twelve
Months end at furthest, and then an Ar-
tificial Lee will have a due time allowed
it to do good and not harm.

*An Excellent Composition for feeding Butt
or keeping Beers with.*

Take a Quart of *French* Brandy, or as
much of *English*, that is free from any
burnt Tang, or other ill taste, and is full
Proof, to this put as much Wheat or
Bean

Flower as will knead it into a Dough, put it in long pieces into the Bung Hole, as soon as the Beer has done working, or afterwards, and let it gently fall piece by piece to the bottom of the Butt, this will maintain the Drink in a mellow freshness, keep staleness off for some time, and cause it to be the stronger as it grows Aged.

A N O T H E R.

Take one Pound of Treacle or Honey, one Pound of the Powder of dried Oyster-shells or fat Chalk, mix them well and put it into a Butt, as soon as it has done working or some time after, and Bung it well, this will both fine and preserve the Beer in a soft, smooth Condition for a great while.

A N O T H E R.

Take a Peck of Egg-shells and dry them in an Oven, break and mix them with two Pound of fat Chalk, and mix them with water wherein four Pounds of coarse Sugar has been boiled, and put it into the Butt as aforesaid.

94 *The Nature of the Barley-Corn,*

*To fine and preserve Beers and Ales by
boiling an Ingrèdient in the Wort.*

This most valuable way I frequently follow both for Ale, Butt-beer and small Beer, and that is, in each Barrel Copper of Wort, I put in a Pottle, or two Quarts of whole Wheat as soon as I can, that it may soak before it boils, then I strain it thro' a Sieve, when I put the Wort in cooling Tubs, and if it is thought fit the same Wheat may be boiled in a second Copper: Thus there will be extracted a gluey Consistence, which being incorporated with the Wort by boiling, gives it a more thick and ponderous Body, and when in the Cask, soon makes a Sediment or Lee, as the Wort is more or less loaded with the weighty Particles of this fizy Body; but if such Wheat was first parched or baked in an Oven, it would do better, as being rather too raw as it comes from the Ear.

Another Way

A Woman, who lived at *Leighton Buzzard* in *Bedfordshire*, and had the best Ale in the Town, once told a Gentleman, she had Drink just done working in the Barrel,

rel, and before it was Bung'd would wager it was fine enough to Drink out of a Glass, in which it should maintain a little while a high Froth; and it was true, for the Ivory shavings that she boiled in her Wort, was the Cause of it, which an Acquaintance of mine accidentally had a View of as they lay spread over the Wort in the Copper; so will Hartshorn shavings do the same and better, both of them being great finers and preservers of malt Liquors against staleness and sourness, and are certainly of a very alcalous Nature. Or if they are put into a Cask when you Bung it down, it will be of service for that purpose; but these are dear in Comparison of the whole Wheat, which will in a great measure supply their Place, and after it is used, may be given to a poor Body, or to the Hog.

To stop the Fret in Malt Liquors.

Take a Quart of Black Cherry Brandy, and pour it in at the Bung-hole of the Hoghead and stop it close.

To recover deadish Beer.

When strong Drink grows flat, by the loss of its Spirits, take four or five Gallons

96 *The Nature of the Barley-Corn,*
lons out of a Hoghead, and boil it with
five Pound of Honey, skim it, and when
cold, put it to the rest, and stop it up
close: This will make it pleasant, quick and
strong.

To make stale Beer drink new.

Take the Herb *Horehound*, stamp it
and strain it, then put a Spoonful of the
juice (which is an extream good Pecto-
ral) to a pitcher-full of Beer, let it stand
covered about two Hours and drink it.

To fine Malt Liquors.

Take a pint of water, half an Ounce
of unslack'd Lime, mix them well toge-
ther, let it stand three Hours and the
Lime will settle to the Bottom, and the
water be as clear as Glas, pour the water
from the Sediment, and put it into your
Ale or Beer, mix it with half an Ounce
of Ising-glass first cut small and boiled, and
in five Hours time or less the Beer in the
Barrel will settle and clear.

There are several other Compositions
that may be used for this purpose, but
none that I ever heard of will answer
like those most Excellent Balls that Mr.
Ellis of Little Gaddesden in Hertfordshire
has found out by his own Experience to
be

be very great Refiners, Preservers and Relishers of Malt Liquors and Cyders, and will also recover damag'd Drinks, as I have mentioned in my Second Book, where I have given a further Account of some other things that will fine, colour and improve Malt Drinks: The Balls are sold at



CHAP. XV.

Of several pernicious Ingredients put into Malt Liquors to encrease their Strength.

MALT Liquors, as well as several others, have long lain under the disreputation of being adulterated and greatly abused by avaritious and ill-principled People, to augment their Profits at the Expence of the precious Health of human Bodies, which, tho' the greatest Jewel in Life, is said to be too often lost by the Deceit of the Brewer, and the Intemperance of the Drinker: This undoubtedly was one, and I believe the greatest, of the Lord Bacon's Reasons for saying, he thought not one *Englishman* in a thousand died a natural Death. Nor

H

is

98 *The Nature of the Barley-Corn,*
is it indeed to be much wondered at, when, according to Report, several of the Publicans make it their Business to study and practise this Art, witness what I am afraid is too true, that some have made use of the *Coculus India* Berry for making Drink heady, and saving the Expence of Malt; but as this is a violent Poison by its narcotick stupifying Quality, if taken in too large a degree, I hope this will be rather a prevention of its use than an invitation, it being so much of the nature of the deadly Nightshade, that it bears the same Character; and I am sure the latter is bad enough; for one of my Neighbour's Brothers was killed by eating its Berries that grow in some of our Hedges, and so neatly resembles the black Cherry, that the Boy took the wrong for the right.

There is another sinister Practice said to be frequently used by ill Persons to supply the full quantity of Malt, and that is *Coriander* Seeds: This also is of a heady nature boiled in the Wort, one Pound of which will answer to a Bushel of Malt, as was ingenuously confess'd to me by a Gardener, who own'd he sold a great deal of it to Alehouse Brewers (for I don't suppose the great Brewer would be concern'd in any such Affair) for that purpose,

purpose, at Ten-pence *per* Pound; but how wretchedly ignorant are those that make use of it, not knowing the way first to cure and prepare it for this and other mixtures, without which it is a dangerous thing, and will cause Sickness in the Drinkers of it. Others are said to make use of Lime-stones to fine and preserve the Drink; but to come off the fairest in such foul Artifices, it has been too much a general Practice to beat the Yeast so long into the Ale, that without doubt it has done great Prejudice to the Healths of many others besides the Person I have writ of in the Preface of my Second Book. For the sake then of Seller and Buyer, I have here offered several valuable Receipts for fining, preserving and mellowing Beers and Ales, in such a true healthful and beneficial manner, that from henceforth after the Perusal of this Book, and the knowledge of their worth are fully known, no Person, I hope, will be so sordidly obstinate as to have any thing to do with such unwholesome Ingredients; because these are not only of the cheapest sort, but will answer their End and Purpose; and the rather, since Malts are now only twenty Shillings *per* Quarter, and like to hold a low Price for Reasons that I could here assign.

100 *The Nature of the Barley-Corn,*

I own, I formerly thought they were too valuable to expose to the Publick by reason of their Cheapness and great Virtues, as being most of them wholsomer than the Malt itself, which is but a corrupted Grain: But, as I hope they will do considerable Service in the World towards having clear salubrious and pleasant Malt Liquors in most private Families and Ale-houses, I have my Satisfaction.



C H A P. XVI.

Of the Cellar or Repository for keeping Beers and Ales.

IT's certain by long Experience, that the Weather or Air has not only a Power or Influence in Brewings; but also after the Drink is in the Barrel, Hogshead or Butt, in Cellars or other Places, which is often the cause of forwarding or retarding the fineness of Malt Liquors; for if we brew in cold Weather and the Drink is to stand in a Cellar of Clay, or where Springs rise, or Waters lye or pass through, such a Place by consequence will check the due working of the Drink,
chill,

chill, flat, deaden and hinder it from becoming fine. So likewise if Beer or Ale is brewed in hot Weather and put into Chalky, Gravelly or Sandy Cellars, and especially if the Windows open to the South, South-East, or South-West, then it is very likely it will not keep long, but be muddy and stale: Therefore, to keep Beer in such a Cellar, it should be brewed in *October*, that the Drink may have time to cure itself before the hot Weather comes on; but in wettish or damp Cellars, 'tis best to Brew in *March*, that the Drink may have time to fine and settle before the Winter Weather is advanced. Now such Cellar Extremities should, if it could be done, be brought into a temperate State, for which purpose some have been so curious as to have double or treble Doors to their Cellar to keep the Air out, and then carefully shut the outward, before they enter the inward one, whereby it will be more secure from aerial Alterations; for in Cellars and Places, that are most exposed to such Seasons, Malt Liquors are frequently disturb'd and made unfit for a nice Drinker; therefore if a Cellar is kept dry and these Doors to it, it is reckoned warm in Winter and cool in Summer, but the best of Cellars are thought to be those in Chalks, Gravels or

102 *The Nature of the Barley-Corn,*
Sands, and particularly in Chalks, which
are of a drying quality more than any o-
ther, and consequently dissipates Damps
the most of all Earths, which makes it
contribute much to the good keeping of
the Drink; for all damp Cellars are pre-
judicial to the Preservation of Beers and
Ales, and sooner bring on the rotting of
the Casks and Hoops than the dry ones;
Insomuch that in a chalky Cellar near me,
their Ashen broad Hoops have lasted above
thirty Years: Besides, in such inclosed Cel-
lars and temperate Air, the Beers and
Ales ripen more kindly, are better di-
gested and softned, and drink smooth-
er: But when the Air is in a dispropor-
tion by the Cellars letting in Heats and
Colds, the Drink will grow Stale and be
disturbed, sooner than when the Air is
kept out: From hence it is, that in some
Places their Malt Liquors are exceeding
good, because they brew with Pale or
Amber Malts, Chalky Water, and keep
their Drinks in close Vaults or proper dry
Cellars, which is of such Importance, that
notwithstanding any Malt Liquor may
be truly brewed, yet it may be spoiled in
a bad Cellar that may cause such alter-
nate Fermentations as to make it thick and
sour, tho' it sometimes happens that af-
ter such Changes it fines itself again; and

to prevent these Commotions of the Beer, some brew their pale Malt in *March* and their brown in *October*, for that the pale Malt, having not so many fiery Particles in it as the brown, stands more in need of the Summer's Weather to ripen it, while the brown sort being more hard and dry is better able to defend itself against the Winter Colds that will help to smoothe its harsh Particles; yet when they happen to be too violent, Horse-dung should be laid to the Windows as a Fortification against them; but if there were no Lights at all to a Cellar, it would be better.

Some are of Opinion, that *October* is the best of all other Months to brew any sort of Malt in, by reason there are so many cold Months directly follow, that will digest the Drink and make it much excel that Brewed in *March* because such Beer will not want that Care and Watching, as that brewed in *March* absolutely requires, by often taking out and putting in the Vent-peg on Change of Weather; and if it is always left out, then it deadens and palls the Drink; yet if due Care is not taken in this respect, a Thunder or Stormy Night may marr all, by making the Drink ferment and burst the Cask; for which Reason, as Iron Hoops

104 *The Nature of the Barley-Corn,*
are most in Fashion at this time, they are
certainly the greatest Security to the safe-
ty of the Drink thus exposed; and next
to them is the Chestnut Hoop; both which
will endure a shorter or longer time as
the Cellar is more or less dry, and the
Management attending them: The Iron
Hoop generally begins to rust first at the
Edges, and therefore should be rubbed
off when opportunity offers, and be both
kept from wet as much as possible; for
'tis Rust that eats the Iron Hoop in two
sometimes in ten or twelve Years, when
the Ashen and Chestnut in dry Cellars have
lasted three times as long.



CHAP. XVII.

Of Cleaning and Sweetening of Casks.

IN Case your Cask is a Butt, then
with cold Water first rince out the
Lees clean, and have ready, boiling or ve-
ry hot Water; which put in, and with a
long Stale and a little Birch fastened to
its End, scrub the Bottom as well as you
can: At the same time let there be pro-
vided another shorter Broom of about a
Foot

Foot and a half long, that with one Hand may be so employed in the upper and other Parts as to clean the Cask well: So in a Hoghead or other smaller Vessel, the one-handed short Broom may be used with Water, or with Water, Sand or Ashes, and be effectually cleaned; the outside of the Cask about the Bung-hole should be well washed, lest the Yeast, as it works over, carries some of its Filth with it.

But to sweeten a Barrel, Kilderkin, Firkin or Pin in the great Brewhouses, they put them over the Copper Hole for a Night together, that the Steam of the boiling Water or Wort may penetrate into the Wood; this Way is such a furious Searcher, that unless the Cask is new hooped just before, it will be apt to fall in pieces.

Another Way,

Take a Pottle, or more, of Stone Lime, and put it into the Cask; on this pour some Water and stop it up directly, shaking it well about.

Another Way.

Take a long Linnen Rag and dip it in melted Brimstone, light it at the end, and let

106 *The Nature of the Barley-Corn,*
let it hang pendant with the upper part
of the Rag fastened to the wooden Bung;
this is a most quick sure Way, and will
not only sweeten, but help to fine the
Drink.

A N O T H E R.

Or to make your Cask more pleasant,
you may use the Vintners Way thus:
Take four Ounces of Stone Brimstone,
one Ounce of burnt Alum, and two
Ounces of Brandy; melt all these in an
Earthen Pan over hot Coals, and dip
therein a piece of new Canvas, and in-
stantly sprinkle thereon the Powders of
Nutmegs, Cloves, Coriander and Anise-
seeds: This Canvas set on fire, and let it
burn hanging in the Cask fastened at the
end with the wooden Bung, so that no
Smoke comes out.

For a Musty Cask.

Boil some Pepper in water and fill the
Cask with it scalding hot.

For a very stinking Vessel.

The last Remedy is the Coopers tak-
ing out one of the Heads of the Cask to
scrape

scrape the inside, or new-shave the Staves, and is the surest way of all others, if it is fired afterwards within-side a small matter, as the Cooper knows how.

These several Methods may be made use of at Discretion, and will be of great Service where they are wanted. The sooner also a Remedy is applied, the better; else the Taint commonly encreases, as many have to their prejudice proved, who have made use of such Casks, in hopes the next Beer will overcome it; but when once a Cask is infected, it will be a long while, if ever, before it becomes sweet, if no Art is used. Many therefore of the careful sort, in case they han't a Convenience to fill their Vessel as soon as it is empty, will stop it close, to prevent the Air and preserve the Lees sound, which will greatly tend to the keeping of the Cask pure and sweet against the next Occasion.

To prepare a new Vessel to keep Malt Liquors in.

A new Vessel is most improperly used by some ignorant People for strong Drink after only once or twice scalding with Water, which is so wrong, that such Beer or Ale will not fail of tasting thereof for
half,

108 *The Nature of the Barley-Corn,*
half, if not a whole Year afterwards; such
is the Tang of the Oak and its Bark, as
may be observed from the strong Scents
of Tan-Yards, which the Bark is one
cause of. To prevent then this Inconve-
nience, when your Brewing is over put
up some Water scalding hot, and let it
run thro' the Grains, then boil it and fill
up the Cask, stop it well and let it stand
till it is cold, do this twice, then take the
Grounds of strong Drink and boil in it
green Walnut Leaves and new Hay or
Wheat Straw, and put all into the Cask,
that it be full and stop it close: After
this, use it for small Beer half a Year to-
gether, and then it will be thoroughly
sweet and fit for strong Drinks; or

Another Way.

Take a new Cask and dig a Hole in
the Ground, in which it may lye half
depth with the Bung downwards; let it
remain a Week, and it will greatly help
this or any stinking musty Cask. But be-
sides these, I have writ of two other ex-
cellent Ways to sweeten musty or stink-
ing Casks, in my Second Book of Brew-
ing.

Wine

Wine Casks.

These, in my Opinion, are the cheapest of all others to furnish a Person readily with, as being many of them good Casks for Malt Liquors, because the Sack and White-Wine sorts are already season'd to Hand, and will greatly improve Beers and Ales that are put in them: But beware of the Rhenish Wine Cask for strong Drinks; for its Wood is so tinctured with this sharp Wine, that it will hardly ever be free of it, and therefore such Cask is best used for Small Beer: The Claret Cask will a great deal sooner be brought into a serviceable State for holding strong Drink, if it is two or three times scalded with Grounds of Barrels, and afterwards used for small Beer for some time. I have bought a Butt or Pipe for eight Shillings in *London* with some Iron Hoops on it, a good Hoghead for the same, and the half Hoghead for five Shillings, the Carriage for a Butt by the Waggon thirty Miles is two Shillings and Sixpence, and the Hoghead Eighteen-pence: But to cure a Claret Cask of its Colour and Taste, put a Peck of Stone-Lime into a Hoghead, and pour upon it three Pails of Water; bung immediately with a Wood or Cork Bung,

and

110 *The Nature of the Barley-Corn,*
and shake it well about a quarter of an
Hour, and let it stand a Day and Night,
and it will bring off the red Colour, and
alter the Taste of the Cask very much.
But of three several other excellent Me-
thods for curing musty, stinking, new and
other tainted Casks, I have writ of in
my Account of Casks in my Second Book.



C H A P. XVIII.

*Of Bunging Casks and Carrying of Malt
Liquors to some distance.*

I AM sure this is of no small Conse-
quence, however it may be esteemed
as a light matter by some; for if this is
not duly perform'd, all our Charge, La-
bour and Care will be lost; and therefore
here I shall dissent from my *London* Fash-
ion, where I bung'd up my Ale with Pots
of Clay only, or with Clay mix'd with
Bay Salt, which is the better of the two,
because this Salt will keep the Clay moist
longer than in its Original State; and the
Butt Beers and fine Ales were Bung'd
with Cork drove in with a piece of Hop-
Sack or Rag, which I think are all in-
fid,

pid, and the occasion of spoiling great Quantities of Drink, especially the small Beers; for when the Clay is dry, which is soon in Summer, there cannot be a regular Vent thro' it, and then the Drink from that time flattens and stales to the great loss in a Year to some Owners, and the Benefit of the Brewer; for then a fresh Cask must be Tapp'd to supply it, and the remaining part of the other throw'd away. Now, to prevent this great Inconvenience, my Bung-holes are not quite of the largest size of all, and yet big enough for the common wooden Iron Hoop'd Funnel, used in some Brew-houses: In this I put in a turned piece of Ash or Sallow three Inches broad at Top, and two Inches and a half long, first putting in a double piece of dry brown Paper, that is so broad that an Inch or more may be out of it, after the wooden Bung is drove down with a Hammer pretty tight; this Paper must be furl'd or twisted round the Bung, and another loose piece upon and around that, with a little Yeast, and a small Peg put into the Bung, which is to be raised at Discretion when the Beer is drawing, or at other times to give it Vent if there should be occasion: Others will put some Coal or Wood Ashes wetted round this Bung, which will bind very

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very hard, and prevent any Air getting in to or out of the Cask; but this in time is apt to rot, and wear the Bung-hole by the Salt or Sulphur in the Ashes, and employing a Knife to scrape it afterwards. Yet, for keeping Beers, it's the best Security of all other ways whatsoever.

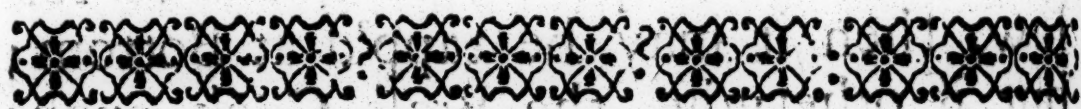
There is also a late Invention practised by a common Brewer in the Country that I am acquainted with, for the safe Carriage of Drink on Drays, to some distance without losing any of it, and that is in the Top Center of one of these Bungs, he puts in a wooden Funnel, whose Spout is about four Inches long, and less than half an Inch Diameter at Bottom; this is turned at Top into a concave Fashion like a hollow round Bowl, that will hold about a Pint, which is a constant Vent to the Cask, and yet hinders the Liquor from ascending no faster than the Bowl can receive, and return it again into the Barrel: I may say further, he has brought a Barrel two Miles, and it was then full when it arrived at his Customers, because the Pint that was put into the Funnel, at setting out, was not at all lost when he took it off the Dray; this may be also made of Tin, and will serve from the Butt to the small Cask.

In

In the Butt there is a Cork-hole made about two Inches below the upper Head, and close under that a piece of Leather is nailed Spout-fashion, that jets three Inches out; from which the Yeast works and falls into a Tub, and when the working is over the Cork is put closely in, for the Bung in the Head of the upright Cask is put in as soon as it is filled up with new Drink: Now when such a Cask is to be broach'd and a quick Draught is to follow, then it may be tapp'd at Bottom; but if otherwise, the Brass Cock ought to be first put in at the middle, and before the Drink sinks to that it should be Tapp'd at Bottom to prevent the breaking of the Head of Yeast, and its growing stale, flat and sour.

In some Places in the Country when they brew Ale or Beer to send to *London* at a great Distance, they let it be a Year old before they Tap it, so that then it is perfectly fine; this they put into small Casks that have a Bung-hole only fit for a large Cork, and then they immediately put in a Role of Bean-flour first kneaded with Water or Drink, and baked in an Oven, which is all secured by pitching in the Cork, and so sent in the Waggon; the Bean-flour feeding and preserving the Body of the Drink all the way, with-

114 *The Nature of the Barley-Corn,*
out fretting or causing it to burst the Cask
for want of Vent, and when Tapp'd will
also make the Drink very brisk, because
the Flour is in such a hard Consistence,
that it won't dissolve in that time; but if
a little does mix with the Ale or Beer, its
heavy Parts will sooner fine than thicken
the Drink and keep it mellow and lively
to the last, if Air is kept out of the Bar-
rel.



C H A P. XIX.

Of the Strength and Age of Malt Li- quors.

WHETHER they be Ales or strong
Beers, it is certain that the mid-
ling sort is allowed by Physicians to be the
most agreeable of any, especially to those
of a sedentary Life, or those that are not
occupied in such Business as promotes
Perspiration enough to throw out and
break the Viscidities of the stronger sorts;
on which account the laborious Man has
the advantage, whose Diet being poor
and Body robust, the strength of such
Liquors gives a Supply and better digests
into

into Nourishment : But for the unactive Man a Hogshead of Ale which is made from six Bushels of Malt is sufficient for a Diluter of their Food, and will better assist their Constitution than the more strong sort, that would in such produce Obstructions and ill Humours; and therefore that Quantity for Ale, and ten Bushels for a Hogshead of strong Beer that should not be Tapp'd under nine Months, is the most healthful. And this I have experienc'd by enjoying such an Amber Liquor that has been truly brewed from good Malt, as to be of a Vinous Nature, that would permit of a hearty Dose over Night, and yet the next Morning leave a Person light, brisk and unconcern'd. This then is the true Nostrum of Brewing, and ought to be studied and endeavoured for by all those that can afford to follow the foregoing Rules, and then it will supply in a great measure those chargeable (and often adulterated tartarous arthritick) Wines. So likewise for small Beer, especially in a Farmer's Family where it is not of a Body enough, the Drinkers will be feeble in hot Weather and not be able to perform their Work, and will also bring on Distempers, besides the loss of time, and a great waste of such Beer that is generally much

116 *The Nature of the Barley-Corn,*
thrown away; because Drink is certainly
a Nourisher of the Body, as well as Meats,
and the more substantial they both are,
the better will the Labourer go through
his Work, especially at Harvest; and in
large Families the Doctor's Bills have prov-
ed the Evil of this bad Oeconomy, and
far surmounted the Charge of that Malt
that would have kept the Servants in
good Health, and preserved the Beer
from such Waste as the smaller sort is lia-
ble to.

'Tis therefore that some prudent Farm-
ers will brew their Ale and small Beer
in *March*, by allowing of five or six Bu-
shels of Malt, and two Pounds of Hops
to the Hogshead of Ale, and a quarter of
Malt and three Pounds of Hops to five
Barrels of small Beer. Others there are,
that will brew their Ale or strong Beer in
October, and their small Beer a Month be-
fore it is wanted. Others will brew their
Ale and small Beer in *April, May* and *June*;
but this according to humour, and there-
fore I have hinted of the several Seasons
for Brewing these Liquors: However in
my Opinion, whether it be strong or small
Drinks, they should be clear, smooth and
not too small, if they are design'd for
Profit and Health; for if they are other-
wise, it will be a sad Evil to Harvest
Men,

Men, because then they stand most in need of the greatest Balsamicks: To this end some of the softning Ingredients mentioned in the foregoing Receipts should be made use of to feed it accordingly, if these Drinks are brewed forward. And that this particular important Article in the Brewing Oeconomy may be better understood, I shall here recite Dr. *Quincy's* Opinion of Malt Liquors, *viz.* The Age of Malt Drinks makes them more or less wholesome, and seems to do somewhat the same as Hops; for those Liquors which are longest kept, are certainly the least viscid; Age by degrees breaking the viscid Parts, and rendering them smaller, makes them finer for Secretion; but this is always to be determined by their Strength, because in Proportion to that will they sooner or later come to their full Perfection and likewise their Decay, until the finer Spirits quite make their Escape, and the remainder becomes vapid and sour. By what therefore has been already said, it will appear that the older Drinks are the more healthful, so they be kept up to this Standard, but not beyond it. Some therefore are of Opinion, that strong Beer brewed in *October* should be Tapp'd at *Midsummer*, and that brewed in *March* at *Christmas*, as being most agreeable to the

118 *The Nature of the Barley-Corn,*
Seasons of the Year that follow such Brew-
ings: For then they will both have part
of a Summer and Winter to ripen and di-
gest their several Bodies; and 'tis my hum-
ble Opinion, that where the Strength of
the Beer, the Quantity of Hops, the boil-
ing Fermentation and the Cask are all
rightly managed, there Drink may be most
excellent, and better at nine Months Age,
than at nine Years, for Health and Plea-
sure of Body. But to be truly certain of
the right Time, there should be first an
Examination made by Pegging the Vessel
to prove if such Drink is fine, the Hop
sufficiently rotted, and it be mellow and
well tasted.



CHAP. XX.

*Of the Pleasure and Profit of Private
Brewing, and the Charge of buying
Malt Liquors.*

HERE I am to treat of the main
Article of shewing the difference
between brewing our own Ales and Beers,
and buying them, which I doubt not will
appear

appear so plain and evident, as to convince any Reader, that many Persons may save well towards half in half, and have their Beer and Ale strong, fine and aged at their own Discretion: A satisfaction that is of no small weight, and the rather since I have now made known a Method of Brewing a Quantity of Malt with a little Copper and a few Tubs, a Secret that has long wanted Publication; for now a Person may Brew in a little Room, and that very safely by keeping his Wort from Foxing, as I have already explained, which by many has been thought impossible heretofore; and this Direction is the more Valuable as there are many Thousands who live in Cities and Towns, that have no more than a few Yards Square of Room to perform a private Brewing in. And as for the trouble, it is easy to account for by those who have time enough on their Hands, and would do nothing else if they had not done this: Or if a Man is paid half a Crown a Day for a Quantity accordingly: Or if a Servant can do this besides his other Work for the same Wages and Charge, I believe the following account will make it appear it is over-ballanc'd considerably, by what such a Person may save in this undertaking, besides the Pleasure of thorough-

120 *The Nature of the Barley-Corn,*
 ly knowing the several Ingredients and
 Cleanliness of the Brewer and Utensils.
 In several of the Northern Counties of
England, where they have good Barley,
 Coak-dryed Malt, and the Drink brewed
 at Home, there are seldom any bad Ales
 or Beers, because they have the Know-
 ledge in Brewing so well, that there are
 hardly any common Brewers amongst
 them: In the West indeed there are some
 few, but in the South and East Parts
 there are many; and now follows the
 Account, that I have Stated according to
 my own general Practice, *viz.*

*A Calculation of the Charge and Profit of
 Brewing six Bushels of Malt for a pri-
 vate Family.*

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Six Bushels of Malt at 2 <i>s.</i> 8 <i>d.</i> <i>per</i> Bushel, Barley being this Year 1733. sold for 14 <i>s.</i> <i>per</i> Quarter by the Farmer	0	16	0
Hops one Pound	0	1	6
Yeast a Quart	0	0	4
Coals one Bushel, or if Wood or Furze	0	1	0
A Man's Wages a Day	0	2	6
	<hr/>		
Total	1	1	4

Of

Of these six Bushels of Malt I make one Hogshead of Ale and another of small Beer; But if I was to buy them of some common Brewers, the Charge will be as follows, viz.

	l.	s.	d.
One Hogshead of Ale contain- ing 48 Gallons, at 6 d. per Gallon is	1	4	0
One Hogshead of small Beer containing 54 Gallons, at 2 d. per Gallon is			
		0	9
		—	—
	1	13	0
		—	—
Total Saved	0	11	8

By the above Account it plainly appears, that 11 s. and 8 d. is clearly gained in Brewing of six Bushels of Malt at our own House for a private Family, and yet I make the Charge fuller by 2 s. and 6 d. then it will happen with many, whose Conveniency by Servants, &c. may intirely take it off; besides the six Bushels of Grains that are currently sold for Three-pence the Bushel, which will make the Eleven and Eight-pence more by four Shillings, without reckoning any thing for Yeast, that in the very cheapest time
sells

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sells here for Four-pence the Quart, and many times there happens three Quarts from so much Drink; so that there may possibly be gained in all sixteen Shillings and Eight-pence: A fine Sum indeed in so small a Quantity of Malt. But here by course will arise a Question, whether this Ale is as good as that bought of some of the common Brewers at Six-pence a Gallon; I can't say all is; however I can aver this, that the Ale I brew in the Country from six Bushels of Malt for my Family, I think is generally full as good, if not better than any I ever sold at that Price in my *London* Brewhouse: And if I should say, that where the Malt, Water and Hops are right good, and the Brewer's Skill answerable to them, there might be a Hoghead of as good Ale and another of small Beer made from five Bushels as I desire to use for my Family, or for Harvest Men; It is no more than I have many times experienc'd, and 'tis the common length I made for that Purpose. And whoever makes use of true Pale and Amber Malts, and pursues the Directions of this Book, I doubt not but will have their Expectation fully answered in this last Quantity, and so save the great Expence of Excise that the common Brewers Drink is always clogg'd with, which is no less than

and of the proper Soils, &c. 123
than five Shillings for Ale and Eighteen-
pence *per* Barrel for small Beer.



CHAP. XXI.

*A Philosophical Account for Brewing
strong October Beer. By an Inge-
nious Hand.*

IN Brewing, your Malt ought to be
found and good, and after its making
to lye two or more Months in the Heap,
to come to such a temper, that the Ker-
nel may readily melt in the washing.

The well dressing your Malt, ought to
be one chief Care; for unless it be freed
from the Tails and Dust, your Drink will
not be fine and mellow as when it is clean
dressed.

The grinding also must be considered
according to the high or low drying of
the Malt; for if high dried, then a gross
grinding is best, otherwise a smaller may
be done; for the Care in grinding con-
sists herein, lest too much of the Husk
being ground small should mix with the
Liquor, which makes a gross Feces, and
confe-

124 *The Nature of the Barley-Corn,*
consequently your Drink will have too
fierce a Fermentation, and by that means
make it Acid, or that we call Stale.

When your Malt is ground, let it stand
in Sacks twenty-four Hours at least, to
the end that the Heat in grinding may
be allayed, and 'tis conceived by its so
standing that the Kernel will dissolve the
better.

The measure and quantity we allow of
Hops and Malt, is five Quarter of Malt
to three Hogsheads of Beer, and eighteen
Pounds of Hops at least to that Quantity
of Malt, and if Malt be pale dried, then
add three or four Pounds of Hops more.

The Choice of Liquor for Brewing is
of considerable advantage in making good
Drink, the softest and cleanest water is
to be preferr'd, your harsh water is not
to be made use of.

You are to boil your first Liquor, ad-
ding a Handful or two of Hops to it, then
before you strike it over to your Goods or
Malt, cool in as much Liquor, as will
bring it to a temper not to scald the Malt,
for it is a fault not to take the Liquor as
high as possible, but not to scald.

The next Liquors do the same.

And indeed all your Liquors ought to be taken as high as may be, that is not to scald.

When you let your Wort from your Malt into the Underback, put to it a Handful or two of Hops, 'twill preserve it from that accident which Brewers call Blinking or Foxing.

In boiling your Worts, the first Wort boil high or quick; for the quicker the first Wort is boiled, the better it is.

The second boil more than the first, and the third or last more than the second.

In cooling lay your Worts thin, and let each be well cooled, and Care must be taken in letting them down into the Tun, that you do it leisurely, to the end that as little of the Feces or Sediment which causes the Fermentation to be fierce or mild, for

Note, there is in all fermented Liquors, Salt and Sulphur, and to keep these two Bodies in a due Proportion, that the Salt does not exalt itself above the Sulphur, consists a great part of the Art in Brewing.

When

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When your Wort is first let into your Tun, put but a little Yeast to it, and let it work by degrees quietly, and if you find it works but moderate, whip in the Yeast two or three times or more, till you find your Drink well fermented, for without a full opening of the Body by fermentation, it will not be perfect fine, nor will it drink clean and light.

When you cleanse, do it by a Cock from your Tun, placed six Inches from the Bottom, to the end that most of the Sediment may be left behind, which may be thrown on your Malt to mend your small Beer.

When your Drink is Tunn'd, fill your Vessel full, let it work at the Bung-hole, and have a reserve in a small Cask to fill it up, and don't put any of the Drink which will be under the Yeast after it is work'd over into your Vessels, but put it by itself in another Cask, for it will not be so good as your other in the Cask.

This done, you must wait for the finishing of the fermentation, then stop it close, and let it stand till the Spring, for Brewing ought to be done in the Month of *October*, that it may have time to settle and digest all the Winter Season.

In the Spring you must unstop your Vent-hole and thereby see whether your Drink doth ferment or not, for as soon as the warm Weather comes, your Drink will have another fermentation, which when it is over, let it be again well stopped and stand till *September* or longer, and then Peg it; and if you find it pretty fine, the Hop well rotted and of a good pleasant taste for drinking.

Then and not before draw out a Gallon of it, put to it two Ounces of Ising-glass cut small and well beaten to melt, stirring it often and whip it with a Wisk till the Ising-glass be melted, then strain it and put it into your Vessel, stirring it well together, stop the Bung slightly, for this will cause a new and small fermentation, when that is over stop it close, leaving only a Vent-hole a little stopp'd, let it stand, and in ten Days or a little more, it will be transparently fine, and you may drink of it out of the Vessel till two parts in three be drawn, then Bottle the rest, which will in a little time come to drink very well.

If your Drink in *September* be well condition'd for taste, but not fine, and you desire to drink it presently, rack it before you put your Ising-glass to it, and then it
will

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will fine the better and drink the cleaner.
To make Drink fine quickly, I have
been told that by separating the Liquor
from the Feces, when the Wort is let out
of the Tun into the Underback, which
may be done in this manner, when you
let your Wort into your Underback out
of your Tun, catch the Wort in some
Tub so long, and so often as you find it
run foul, put that so catched on the Malt
again, and do so till the Wort run clear
into the Underback. This is to me a ve-
ry good way (where it may be done) for
'tis the Feces which causes the fierce and
violent fermentation, and to hinder that
in some measure is the way to have fine
Drink: Note that the finer you make
your Wort, the sooner your Drink will
be fine, for I have heard that some Cur-
ious in Brewing have caused Flannels to
be so placed, that all the Wort may run
thro' one or more of them into the Tun
before working, by which means the
Drink was made very fine and well tasted.

Observations on the foregoing Account.

This Excellent Philosophical Account
of Brewing *Octoler* Beer, has hitherto
remained in private Hands as a very great
Secret,

Secret, and was given to a Friend of mine by the Author himself, to whom the World is much obliged, altho' it comes by me ; In justice therefore to this ingenious Person, I would here mention his Name, had I leave for so doing ; but at present this Intimation must suffice. However, I shall here take notice, that his Caution against using tailed or dusty Malt, which is too commonly sold, is truly worthy of Observation ; for these are so far from producing more Ale or Beer, that they absorb and drink part of it up.

In Grinding Malts he notifies well to prevent a foul Drink.

The quantity he allows is something above thirteen Bushels to the Hogshead which is very sufficient ; but this as every body pleases.

The Choice of Liquors or Waters for Brewing, he says, is of considerable advantage ; and so must every body else that knows their Natures and loves Health, and pleasant Drink : For this purpose, in my Opinion, the Air and Soil is to be regarded where the Brewing is performed ; since the Air affects all things it can come at, whether Animal, Vegetable or Mineral, as may be proved from many Instances : In the Marshes of *Kent* and *Essex*,

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sex, the Air there is generally so infectious by means of those low vaeſy boggy Grounds, that ſeldom a Perſon eſcapes an Ague one time or other, whether Natives or Aliens, and is often fatally known to ſome of the *Londoners* and others who merrily and nimbly travel down to the Iſles of *Grain* and *Sheppy* for a valuable Harveſt, but in a Month's time they generally return thro' the Village of *Shorne* with another Mien. There is alſo a little *Moor* in *Hertfordſhire*, thro' which a Water runs that frequently gives the *Pafſant* Horſes that drink of it, the Colick or Gripes, by means of the aluminous ſharp Particles of its Earth; Its Air is alſo ſo bad, as has obliged ſeveral to remove from its Situation for their Healths: The Dominion of the Air is likewise ſo powerful over Vegetables, that what will grow in one Place won't in another, as is plain from the Beech and Black Cherry Tree, that reſuſe the Vale of *Ailesbury* tho' on ſome Hills there, yet will thrive in the *Chiltern* or Hilly Country: So the Limes and other Trees about *London* are all generally black-barked, while thoſe in the Country are moſt of them of a Silver white. Water is alſo ſo far under the Influence of the Air and Soil, as makes many

ny excellent for Brewing when others are as bad. In Rivers, that run thro' boggy Places, the Sullage or Washings of such Soils are generally unwholsome as the nature of such Ground is; and so the Water becomes infected by that and the Effluvia or Vapour that accompanies such Water: So Ponds are surely good or bad, as they are under too much Cover or supply'd by nasty Drains, or as they stand situated or exposed to good and bad Airs. Thus the Well-waters by consequence share in the good or bad Effects of such Soils that they run thorough, and the very Surface of the Earth by which such Waters are strained, is surely endowed with the quality of the Air in which it lies; which brings me to my intended purpose, to prove that Water drawn out of a Chalky or Fire-stone Well, which is situated under a dry sweet loamy Soil, in a fine pure Air, and that is perfectly soft, must excel most if not all other Well-waters for the purpose in Brewing. The Worts also that are rooted in such an Air, in course partakes of its nitrous Benefits, as being much exposed thereto in the high Backs or Coolers that contain them. In my own Grounds I have Chalks under Clays and Loams; but as the latter is bet-

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ter than the former, so the Water proves more soft and wholesome under one than the other: Hence then may be observed the contrary Quality of those harsh curdling Well-waters that many drink of in their Malt Liquors, without considering their ill Effects, which are justly condemn'd by this able Author as unfit to be made use of in Brewing *October Beer*.

The boiling a few Hops in the first Water is good, but they must be strained thro' a Sieve before the Water is put into the Malt; and to check its Heat with cold Liquor, or to let it stand to cool some time, is a right Method, lest it scalds and locks up the Pores of the Malt, which would then yield a thick Wort to the end of the Brewing and never be good Drink.

His putting Hops into the Underback, is an excellent Contrivance to prevent foxing, as I have already hinted.

The quick boiling of the Wort is of no less Service, and that the smaller Wort should be boiled longer than the strong is good Judgment, because the stronger the Wort, the sooner the Spirits flie away and the waste of more Consequence; besides if the first Wort was to be boiled too long, it would obtain so thick a Body, as to prevent in great measure its fining hereafter

after so soon in the Barrel; while the smaller sort will evaporate its more watry Parts, and thereby be brought into a thicker Consistence, which is perfectly necessary in thin Worts; and in this Article lies so much the Skill of the Brewer, that some will make a longer Length than ordinary from the Goods for small Beer, to shorten it afterwards in the Copper by Length of boiling, and this way of consuming it is the more natural, because the remaining part will be better Cured.

The laying Worts thin is a most necessary Precaution; for this is one way to prevent their running into Cohesions and Foxing, the want of which Knowledge and Care has undoubtedly been the occasion of great Losses in Brewing; for when Worts are tainted in any considerable degree, they will be ropy in time and unfit for the human Body, as being unwholesome as well as unpleasant. So likewise is his *Item* of great Importance, when he advises to draw the Worts off fine out of the Backs or Coolers, and leave the Feces or Sediments behind, by reason, as he says, they are the cause of those two detested Qualities in Malt Liquors, staleness and foulness, two Properties that ought to imploy the greatest Care in
Brewers

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Brewers to prevent; for 'tis certain these Sediments are a Composition of the very worst part of the Malt, Hops and Yeast, and, while they are in the Barrel, will so tincture and impregnate the Drink with their insidious and unpleasant nature, that its Drinkers will be sure to participate thereof more or less as they have lain together a longer or a shorter time. To have then a Malt Drink balsamick and mild, the Worts cannot be run off too fine from the Coolers, nor well fermented too slow, that there may be a Medium kept, in both the Salt and Sulphur that all fermented Malt Drinks abound with, and herein, as he says, lies a great part of the Art of Brewing.

He says truly well, that a little Yeast at first should be put to the Wort, that it may quietly work by degrees, and not be violently forc'd into a high Fermentation; for then by course the Salt and Sulphur will be too violently agitated into such an Excess and Disagreement of Parts, that will break their Unity into irregular Commotions, and cause the Drink to be soon stale and harsh. But if it should be too backward and work too moderate, then whipping the Yeast two or three times into it will be of some service to open the Body
of

of the Beer, for as he observes, if Drink has not a due fermentation, it will not be fine, clean, nor light.

His advice to draw the Drink out of the Tun by a Cock at such a distance from the bottom is right; because that room will best keep the Feces from being disturb'd as the Drink is drawing off, and leaving them behind; but for putting them afterwards over the Malt for small Beer, I don't hold it consonant with good Brewing, by reason in this Sediment there are many Particles of the Yeast, that consequently will cause a small Fermentation in the Liquor and Malt, and be a means to spoil rather than make good small Beer.

What he says of filling up the Cask with a reserve of the same Drink, and not with that which has once worked out, is past dispute just and right.

And so is what he says of stopping up the Vessel close after the Fermentation is over; but that it is best to Brew all strong Beer in *October*, I must here take leave to dissent from the Tenet, because there is room for several Objections in relation to the sort of Malt and Cellar, which as I have before explained, shall say the less here.

As

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As he observes Care should be taken in the Spring to unstop the Vent, lest the warm Weather cause such a Fermentation as may burst the Cask, and also in *September*, that it be first try'd by Pegging if the Drink is fine, well tasted and the Hop rotted; and then if his Way is liked best, bring the rest into a transparent Finess; for Clearness in Malt Liquors, as I said before, and here repeat it again, is a most agreeable Quality that every Man ought to enjoy for his Health and Pleasure, and therefore he advises for dispatch in this Affair, and to have the Drink very fine, to rack it off before the Ising-glass is put in; but I can't be a Votary for this Practice, as believing the Drink must lose a great deal of its Spirits by such shifting; yet I must chime in with his Notion of putting the Wort so often over the Malt till it comes off fine as I have already taught, which is a Method that has been used many Years in the North of *England*, where they are so curious as to let the Wort lie some time in the Underback to draw it off from the Feces there; nor are they less careful to run it fine out of the Cooler into the Tun, and from that into the Cask; in all which three several Places the Wort and Drink
may

may be had clear and fine, and then there will be no more Sediments than is just necessary to assist and feed the Beer, and preserving its Spirits in a due Temper. But if Persons have Time and Conveniency, and their Inclination leads them to obtain their Drink in the utmost Fineness, it is an extraordinary good way to use *Hippocrates* Sleeve or Flannel Bag, which I did in my great Brew-house at *London* for straining off the Feces that were left in the Backs. As to the Quantity of Malt for Brewing a Hogshead of *October* Beer, I am of Opinion thirteen Bushels are right, and so are ten, fifteen and twenty, according as People approve of; for near *Litchfield*, I know some have brewed a Hogshead of *October* Beer from sixteen Bushels of Barley Malt, one of Wheat, one of Beans, one of Pease and one of Oat Malt, besides hanging a Bag of Flower taken out of the last four Malts in the Hogshead for the Drink to feed on; nor can a certain Time be limited and adjusted for the Tapping of any Drink (notwithstanding what has been affirmed to the contrary) because some Hops will not be rotted so soon as others, and some Drinks will not fine so soon as others; as is evident in the Pale Malt Drinks, that will

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seldom or never break so soon in the Copper as the Brown sort, nor will they be so soon ripe and fit to Tap as the high dried Malt Drink will. Therefore what this Gentleman says of trying Drink by first Pegging it before it is Tapp'd, in my Opinion is more just and right than relying on a limited Time for Broaching such Beer.

F I N I S.



11*

THE LONDON and COUNTRY BREWER.

CONTAINING

Several Errors committed
in making MALTS.

Of Brewing WHEAT-
MALT.

Of the Good and Bad
PROPERTIES of the
Hop.

Of the Nature, Preventi-
on, and Cure of Foxed
MALT-LIQUORS, and
UTENSILS.

Several Ways of Reccover-
ing stale or pricked
MALT-LIQUORS.

FERMENTATION.

Brewing DORCHESTER
BEER, SHROPSHIRE

DRINK, and a WEST-
INDIA LIQUOR.

Brewing MALT-DRINKS
without Boiling Water,
Wort, or Hops.

Sir T— S—'s Method of
Brewing a Pipe of Pale
OCTOBER.

The Fraudulent Practice by
short-measured CASKS
exposed.

A LETTER from one
BREWER to another,
concerning Conceal-
ments of MALT-
DRINKS.

To which is added,

A DISSERTATION on the BREWERY, wherein is shewn
the ill Consequence of CLAY-WELLS, and CLAY-BUNGS;
how to brew a clear, sound DRINK with nasty, foul WA-
TER; the prejudicial Nature of FÆCES; with several other
Serviceable Matters.

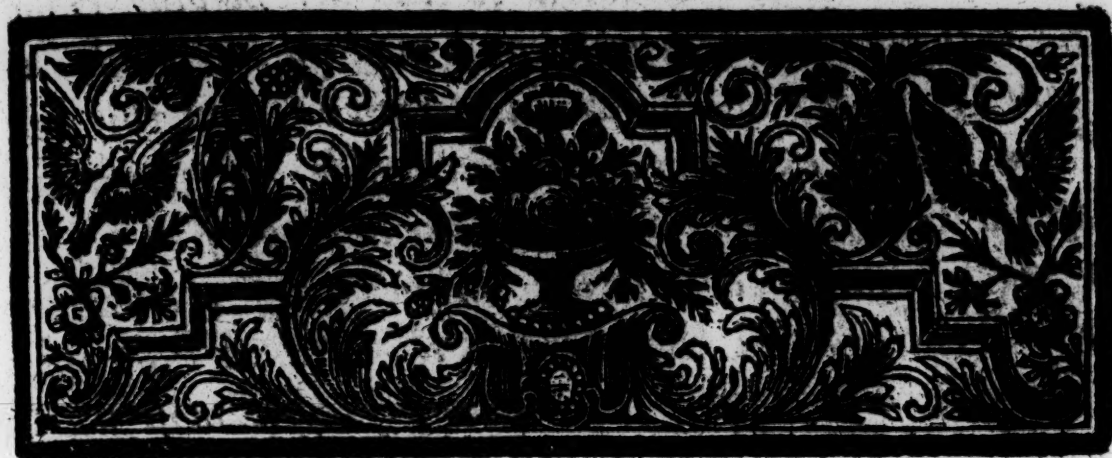
*By a Person formerly concerned in a publick Brewbouse,
in London, but for Twenty Years past has resided in
the Country.*

PART II.

LONDON:

Printed for the AUTHOR, and sold by Mess. Fox, in Westmin-
ster-Hall; W. Meadows, at the Angel in Corn-hill; T. Astley,
at the Rose, in St. Paul's Church-Yard; E. Withers, at the
Seven Stars, opposite to Chancery-Lane, in Fleet-Street; and
W. Bickerton, at Lord Bacon's-Head, without Temple-Bar,
M.DCC.XXXVI. Price 1 s. 6 d.





THE PREFACE

AS it is certain that Malt Liquors above any other Sorts pass through the most Digestions, and are therefore more liable to Mismanagements, which daily Experience confirms ; and as the Use of them is general, and thereon so much depends the Health of the Body, I think it calls for our greatest Study and Application to detect the common Errors, and to lay down such plain, easy, and efficacious Rules and Directions, as may tend to bring about such an Amendment in the Practice of Brewing, and Management of Malt-Liquors, that we may enjoy wholesomer and pleasanter Drink of this Kind, than heretofore, by establishing it upon the Basis of a more just and natural Rationale.

A 2

T H E R E.

THEREFORE, this being premised, I have in my former Work endeavoured to lend my helping Hand, to effect this so much desired and wished for End, as the Quantity of my Sheets would permit: But this being a Science more extensive, and capable of Improvement than the Generality of Mankind are apprehensive of, (who too much content themselves in following the Errors of their Predecessors) I have here in this second Part enlarged on some of my former Heads, as I judged most necessary; and likewise added and discussed such new Matter, as might conduce most to the Improvement of this Art, and the undeceiving of such, who, through Ignorance or Interest, suffer themselves to persist in their Errors.

WHEN a Person is about to brew Malt-Drink, it would not be amiss to put the following, or some suchlike Natural, Quære to himself, *What am I going to do, or What is my Intention in this Procedure?* 'Tis certainly to procure a fine, pure, and light Vinous Liquor, as free from any terrene, clammy, or other Heterogeneous Particles as may be.

BUT how the present usual Management by long Mashings, long Boiling of the Hop, either under or over Cotion of the Wort, violent repeated Beatings in of the Yeast, Mixing injurious Ingredients in the Drink; the prejudicial (tho' common) Use of Clay, &c. I say, how these do answer the Purpose aforesaid, in affording a pure, light, wholesome, and Vinous Drink, I shall leave to the Determination of all such as will but make use of their Reason.

AND were People but to consider the true Nature of Yeast or Barm (that notwithstanding it is so necessary
and

and useful an Ingredient if rightly and judiciously managed, yet is it certain) that it contains very inimical and pernicious Properties, they would never practise those violent, long, and repeated unnatural Beatings in of it into the Drink, which cannot but be attended with many ill and mischievous Effects, notwithstanding the common Specious Pretences in its Behalf. Which I have in my former, as well as in the following Sheets, (I hope) fully confuted and made appear :

BUT farther to illustrate and evince the Truth of my Assertions, I cannot here omit the Case of a Person whose Father being a Tobacconist in London, sent his Son among his Customers at and about Stamford in Lincolnshire, where he fell into Drinking such Quantities of their Yeasty Ale as made him distracted, and so he remained till his obstinate Distemper yielded to the well adapted Medicines of an ingenious Physician, who after some Months Keeping him in his House about thirty Miles from London, at last brought him to his Senses again.

ANOTHER Instance of the ill Properties of Yeast were demonstrated in the following Experiment, (which I had from an ingenious and learned Gentleman who was an Eye-Witness of its Veracity) viz. That some Slices of Bread were put into about two Quarts of Yeast, which an hungry Dog lick'd up for the Sake of the Bread; the Consequence was this, the Dog died in a very little time after, being very much swelled, as it had been with a Dropsy :

THEREFORE I must necessarily join with those judicious Gentlemen, who are of Opinion, that the Drinking of yeasty Malt Liquors, whether new or stale, is the chief Cause of those too frequent fatal Diseases the Dropsy, Stone &c. among us; for if Malt Drink be
hard

hard or stale, in many Constitutions it is manifestly apt to generate fabulous Concretions, not only in the urinary Passages, but in other Parts of the Body; and it is evident that it receives this Staleness or Acidity chiefly from the Yeast, which the Drink is impregnated with, as it serves for a Lee for the Liquor to feed on; just as if we were to put any Quantity of an unwholesome bruised Herb or Root into a Cask of Drink, we might reasonably expect the Liquor to be tinged by it, and to be endued with its ill Qualities: So that it plainly appears how very necessary it is (if we would enjoy wholesome and palatable Malt Drink) to free it as much as possible from that destructive Acid.

I HAVE likewise in this second Treatise farther enlarged on the great Use of artificial Compositions or Lees, and particularly recommended those late invented most excellent wholesome BALLS (mentioned in Page 96 of my former Part) which have so deservedly gained such a Repute, and which are so highly necessary and useful for all Keeping Malt Drinks especially, whether Pale, Amber, or Brown, to have always in them, as nothing can contribute more to their Fining, Feeding, and Preservation in a mild and sound State, and are perfect Antidotes to the ill Qualities of the Yeast, Faces, &c. Likewise of such a curing and improving Nature, that by their sole Use I have even recovered damaged or prick'd Drink and Cyder, and will answer in Wines. These BALLS are sold with proper Directions at the Booksellers whose Names are prefixed to this Works.

• ANOTHER too common Misfortune of our having unwholesome and ill tasted Beers and Ales (especially in Warm Weather) is by what is commonly called Foxing, or more properly from a Putrifaction they are liable to in passing through their several Managements, the Cause, Prevention, and effectual Cure of which grand Evil,

The P R E F A C E.

v

Evil, I have here freely explained and communicated; with several other Matters of great Importance, which duly attended to, will contribute not only to the establishing the Brewery upon a better Footing, but manifestly augment the HEALTH, PLEASURE, and PROFIT of the Subject in general.

ERRATA.

Page 18. Line 24. Read, I come now. p. 59. l. 10, for page 3; read, page 111. p. 61. l. 13. read, that a Pond.

Just Published,

New Experiments IN HUSBANDRY, for the Month of *April.*

NUMB. I.

CONTAINING

SEVERAL Processes of Plowing various Lands. The Transcendant Uses of the late invented Hertfordshire Double-Plough. The Improvements of Grain, Grasses, Manures, and Trees. The Prevention and Cure of Rotten-Sheep; also of the Red-Water, Foot-Rot, &c. Keeping of Hogs, Cows, and Horses, from Diseases. The Bites of Jockeys exposed. Of Pickling Pork, and the proper Vessels to keep it in. The Breeding of Fowls. A New invented Roll. Several curious Letters concerning Husbandry, and the Author's Answers. With other Beneficial Matters tending to the Improvement of this most useful Science. And is not only necessary for all Farmers, Graziers, &c. in this Month, but of great Importance all the Year after.

By WILLIAM ELLIS, of *Little-Gaddesden,*
near *Hempstead,* in *Hertfordshire.*

Printed for the AUTHOR, and sold by Mess. Fox, in *Westminster-Hall*; W. MEADOWS, at the *Angel* in *Corn-hill*; T. ASTLEY, at the *Rose*, in *St. Paul's Church-Yard*; W. BICKERTON, at *Lord Bacon's-Head*, without *Temple-Bar*, and E. WITHERS, at the *Seven-Stars*, opposite to *Chancery-Lane*, in *Fleet-street.*

T H E
C O N T E N T S
O F T H I S
B O O K.

C H A P. I.

O*F the Nature of the Barley Corn,
and of the proper Soils and Ma-
nures for the Improvement thereof*

II. *Of making Malts*

III. *To know Good from Bad Malts*

IV. *Of the Nature and Use of Pale, Am-
ber and Brown Malts*

V. *Of the Nature of several Waters and
their Use in Brewing*

VI. *Of Grinding Malts*

VII. *Of Brewing in General*

VIII. *Of the London Method of Brewing*

IX. *Of*

The CONTENTS.

- IX. Of the Country or private Way of
Brewing
- X. Of the Nature and Use of the Hop
- XI. Of Boiling Malt Liquors
- XII. Of Foxing or Tainting Malt Liquors
- XIII. Of Fermenting and working of Beers
and Ales, and the pernicious Practice
of beating in the Yeast detected
- XIV. Of Artificial Lees for feeding, fin-
ing and preserving Beers and Ales
- XV. Of several pernicious Ingredients put
into Malt Liquors to encrease their
Strength
- XVI. Of the Cellar or Repository for keep-
ing Beers and Ales
- XVII. Of Cleaning and Sweetenig of
Casks
- XVIII. Of Bunging Casks and Carrying
Malt Liquors to some Distance
- XIX. Of the Strength and Age of Malt
Liquors
- XX. Of the Pleasure and Profit of pri-
vate Brewing, and the Charge of buy-
ing Malt Liquors
- XXI. A Philosophical Account of Brew-
ing strong October Beer.





C H A P. I.

Of several Errors and Abuses committed in making BARLEY and WHEAT MALTS.

MALT, like many other Artificials, is most genuine when it is nearest to its Original Nature; and that is so, when it is of a white or pale Amber Colour, as the Barley receives the same from the Earth; for if it is otherways, it is occasioned by some Violence done to its Nature; as when it is over-ripe, or wash'd by Rains to a great Degree after it is mowed, or by its being heated too much in the Mow: So likewise is it in Malt, whose true Tincture and Colour proceeds from its fine Spirits and essential Vertues; for when the Colour is changed in making, the Vertues of it are also; that gives the Drink a different Nature, occasioned by some Violences done to the Spirits and fine Properties of the Malt, by the fierce Spirits and hot Vapours of the Fire, that change its mild Qualities into their own fiery Nature; which makes it plain, that all Digestion is most natural that preserves its true Colour most intire; so that the high coloured Brown Malt is parched and brought by the Potency of the Fire into a State

B

very

2 *Of several Errors and Abuses committed*

very remote from that Purity, which the true made Pale or light Amber coloured Malt enjoys ; from whence is produced the high Blood-coloured Ales and Beers, that many ignorant Persons cry up and admire as a Vertue or good Quality. But to be more particular on this Subject of Malts, I shall recite the Opinion of two Physicians that have appeared in Print : One says, — “ The contrary is to be understood, and nothing in Malt is a greater Vice or Evil, and the Drink made thereof, together with its long Boiling with Hops, does seldom fail to wound the Health of the Drinkers thereof ; its natural Operation in the Body, is to heat the Blood, destroying Appetite, obstructs the Stomach, sending gross Fumes into the Head, dulls the fine pure Spirits, hinders the free Circulation of the Blood, by stagnating the Humours, and in the cholerick and melancholy Complexion generates the Stone, Gravel, Gout, and Consumption : This Sort of Drink is also very injurious to Women, especially such as are with Child or give suck. — The other, who is a more late Writer, and one of the greatest Reputation, says, “ That Brown Malt makes a Drink much less viscid than the Pale, and fitter to pass the several Strainers of the Body ; but what is very strong of it, may be used in Excess enough to bring on several Inconveniencies of Health, tho’ a single Debauch with it, much more easily wears off, than one occasioned by Drink made from Pale Malt :” The same Author further enlarges and says. — “ That Pale Malt has certainly most of the Grain in it, as being slenderest dry’d, and is therefore most nourishing ; but also that very Reason requires a strong Constitution sufficiently to digest it Those who drink much of it, are generally sleek and fat in the Bloom of their Age ; but if they are not suddenly cut off by Fevers as they

“ they generally are, they fall very early into a dis-
“ tempered old Age, and hardly support the Bur-
“ den of Life, with the Retinue of Diseases.” —

Hence it appears, that the Pale and Brown Malts are Extreame, one being too slack, and the other too high dried ; which made the former Person write that all Extreame were degeneracy from the Nature of true Amber Malt made by a mild and gradual Operation ; for then it would not be so apt to send dulling gross thick Fumes and Vapours into the Head, nor to heat the Blood, or obstruct the Passages, especially if Drink made from such Malt was of a middle Strength, and used before it was stale ; then it would deserve the first Place of all fermented Malt Liquors, and be the best against the Generation of the Stone, Gravel, and Gout.

The second Error is, that tho’ Amber Malts are truly the best of all others ; yet in the making of these, there is often a great Abuse committed by several of its Makers, and that by an unnatural drying of it on the Kiln, which is done out of a covetous Desire of drying a great deal of Malt at once, in order to save Fire, Time, and Labour : To do this, they put it seven, ten, or twelve Inches thick on the Kiln ; which never fails damaging the Malt ; for the thicker it lies, the stronger the Fire must be kept, which will be apt to burn that which is next the Hair-Cloth, whilst that which is uppermost is neither hot nor cold, and thereby are the sweet spirituous Parts flattened ; for notwithstanding all the Diligence that can be used, there is no drying it equally, because the Thickness thereof will force it to send Damp excrementitious Vapours, which Effluvia consequently re-enter such Malt, wounding and suffocating the finer Vertues and sweet Qualities, which gives an ill Taste to the Malt and the Drink made thereof : Besides it makes but little Drink, and that not good nor wholesome : And if strong Drink

4 *Of several Errors and Abuses committed*

is made thereof, it's evil Juices are more perceptible by heating the Body, and stupifying the Senses by it's gross heavy Fumes, which renders such Malt a great Enemy to Nature; for sure it is, that every Fault committed in the making of it, affects the Drink more or less; which has begot an Opinion, that there is hardly one Bushel in four rightly made throughout the Nation; and this is chiefly the Reason there are so many bad Sorts of Beers and Ales: Whereas formerly they used to be so careful to let the Malt lie only three four or five Inches thick on the Kiln at most, with a constant Fire not too fierce, and yet indifferent Brisk, which preserves the Spirit and Life of the Malt; for it may as well be too strong as too weak; when too weak, it flattens and dulls the spirituous sweet Qualities; and when too strong, it fires and stagnates them.

The third Error is in drying Malts. They are apt to be tainted by the Smoak through the Carelessness, Covetousness, or Unskilfulness of the Maker. For Smoak, as a Learned Pen defines it, is a stupifying keen Fume or Vapour, full of dark sulphureous Excrements, cast forth by the Fire, containing a gross Humidity, and fiery sharp Qualities very pernicious to Health, as it proceeds from the poisonous Juices of the Coal, Wood, &c. For Fire divides and separates the Forms and Properties of Nature; it is an Excrement all People desire to avoid, as being prejudicial to the fine volatile Spirits, and therefore offensive to the Eyes, where the natural Spirits have their Passage; for which Cause Smoak does first offend the Eyes, or any other stupifying Steam inwardly or outwardly; wherefore when any smoaky Drinks or Meats are separated in the Stomach, the Fume or Vapour thereof naturally ascends to the Head, and is very offensive to Nature, especially the Eyes (as Coal or Wood Smoak does) for it contains two pernicious Qualities, a fullsome
Bitter

Bitter, and a strong Astringent. Therefore all the Care possible must be taken that it is smoaked as little as can be; for that Smoak helps to advance the dull heavy reddish Colour in Drink, which shews the Excellency of the late Invention of drying Malt with Coak or Culm: And also the pernicious Practice of drying with Wood, Furze, or Ferne, &c. which yield a most disagreeable Smoak; yet must it pass thro' the several Kernels of the Malt, and thereby impregnate them with it's bitter, fulsome, unwholesome Qualities; which does not a little raise my Detestation and Abhorrence of that common Error and Imposition on the Ignorance of the People; and the more, when I consider the great Quantities of such Malt, that are annually consumed in some Parts of the West of *England*, and some other populous Cities and Places, in their Butt-Beers and Ales, notwithstanding the small Difference of Charge that there is between drying with Coak, Culm, and Straw, and with Wood, Furze, Fern, Peat, and Stubble, besides the great Inconveniency of the Wood-fire, that can't be so soon check'd nor extinguished as others are, which exposes the Malt to a Damage accordingly:

The Fourth Error is a very knavish, subtle one, indeed; and that is what tempts some Maltsters to suffer the Barley but to half spire, shoot or sprout, on the Floor, in order to save Time, Labour, and Charge; and then such Malt will have a third, fourth, fifth, or sixth part Barley in it, which consequently must deceive its Brewer; for the Barley part will never yield its Goodness like that which is malted, and so the Drink becomes in a great Measure spoiled.

The fifth Error is, what is called in the Cant of a villainous Maltster, Dressing of Malt, but honestly explained, it is no other than a Bite on the Buyer, and is thus managed; before the Malt is carried
out

6 Of several Errors and Abuses committed, &c.

out to answer its Sample or Boyce; A Man takes a Garden Pot, and with it sprinkles Water over the Out-side of a Heap; then with a Shovel he turns it, and does the like, and so on till he thinks it enough. Thus he plumps, and swells the Malt Kernels, that to the Buyer seem bigger than the common Sort, and contain more Flower than the smaller ones can: But this Artifice carries three Reasons with it: One is to forward its Sale, the other to enhance the Price, and the other to fill the Bushel with fewer Corns. The Truth of which would plainly appear, if such Malt was afterward to be kept in a Heap a Month, two, or three; for in that Time, it would grow musty, or matt together, and very likely to breed thole devouring Insects called *Whools*.

The Sixth Error and Abuse, is owing to the Carelessness of the Maltster, who either himself, or by suffering others with their Shoes to tread on many of the Corns of the Malt while they lie working on the Floor, which is often attended with ill Consequences; for by bruising the Kernels, there immediately commences the Growth of a Canker, that will shew itself in a Bunch, turn green, and perhaps one of them may infect six sound ones, and more, if the Misfortune happens to be in the Months of *March*, *April*, and *May*; by which Means a great deal of Drink has suffered in its Taste, and proved unwholesome to the Drinker. For this Reason a careful Maltster will put on a pair of Shoes made of an old Hat; and indeed, it is a pitty the Exciseman is not obliged to do so too; and then, in my Opinion, there would be less Damage done by dirty hard Shoes in the Malt-house; for as he walks between the Heaps, sometimes for near twenty Yards together, there commonly lie many loose Corns that are unavoidable to the Tread, and these consequently must be bruised and canker'd, to the great Prejudice of the Maltster, and

and more to the Drinker of Liquor made from such unwholesome Kernels. So likewise have I Reason to write against the careless Turner of the Malt, who often, I may say, is guilty of doing the like Damage to the Malt by his Shovel, when it's imployed in the Movements of the several Heaps, where it necessarily breaks and bruises many of the Kernels, by jobbing it in amongst them, and scraping along the Floor. But these are but few in Comparison of the many others that are incident to Barley and Malt. Of which I intend to enlarge on in my 3d and last Book.

C H A P. II.

Of W H E A T - M A L T.

WH E A T as it is the most excellent Grain of all others, and as such appointed by the Creator for the Nourishment of the human Body as an Eatable, has tempted my Pen to publish also its fine Quality in producing a good Drink, that no other Grain whatsoever can equalize for its peculiar Virtues; which has surpriz'd me to see that Wheat-Malt should be neglected, tho' this Grain has been sold in our Markets at three Shillings per Bushel, a few Years ago, for three Years together, and only Barley and Oat Malt in Reputation: Whereas this at three I believe I may venture to aver, is upon a Par with Barley at two Shillings, and Oats at one Shilling and Six-pence per Bushel for making of Malt, and far beyond both for making Strong Beer; also particularly for that famous and nutritious Liquor Mum, that has for some Years past been made by the *German*s and others, to the just Reproach of the *English*, who thinking themselves compleatly furnished by Barley and Oat-Malt Liquors have supinely neglected

ted the Improvement of the best of all others, and that is Drink that might be made from this delicate Grain Wheat, for the following Reasons, *viz.*

First then the Flour of Wheat is much finer than that of Barley; and the finer the Flour, the finer the Drink; so also is the Bread made of the one and the other, that bears very distant Proportions of Goodness: The Wheat eats smooth, mellow, sweet, light, and nourishing; when the Barley eats rough, coarse, moist, heavy, and is scouring: Wheat Malt also differs much from Barley Malt; for the former, if well made, will return a pleasant, brisk, nourishing, wholesome Ale and Beer; while Barley-Malt is apt to make a more heavy, scorbutick, and less nourishing Liquor; because,

Secondly, This Wheat-Malt is more natural to the humane Nature, as it is made from the Staff of Life, provided it is not too high dried, and the Goodness burnt away to please the Fancy with a high coloured Drink, and so lose the purest Substance of the Malt according to the Proverb. — I don't care how white my Bread is, nor how brown my Drink is. — But this Proverb was first on Foot, before the Method of making Pale Malt was known: Also if this Sort of Malt is made from impure Wheat, then good Drink must not be expected from it; for such as the Malt is, such will be the Drink; as for Example: In a cheap time of Wheat, and in a dear time of Barley, which sometimes happens, it has been the Practice of a certain Brewer (I have been told) to buy up the smutty Wheat at a very low Rate for making Malt; because when Wheat is thus damnified, there are few that care to make Bread with it, unless it be in a dear time: But when such Grain is malted, it is less perceived in keeping Butt-Beers, than in Bread: Besides, in malt-ing, the black or smutty part of the Kernell is better lost than in the Wheat-Mill; for here the working
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of it on the Floor, and the Fire of the Kiln cure that in a great Measure which the Stones can't, because the good and the bad parts are mix'd and ground together; when in malting, they are better separated and cured, yet not wholly discharged from the Tincture of the Smut, which is the bad Part of such Wheat Kernel.

Thirdly, It has been experienced that the *Dugdale*, or any other coarse Wheat will make good Malt and Drink, which may be a valuable Opportunity to many, because this Sort of Wheat grows only on some ground, and in some Countries where others can't be conveniently had, as in many Places of the North; and also on four Grounds in the South, this Wheat will best grow, and be a surer Crop than any other Sort; nor will it be damaged by Blights and Wets, when others are, by Reason of its great Out-guards, its Beards. This Sort of Wheat also is sold considerably cheaper in the Markets than any other, as being of a coarser Nature than the rest for making of Bread, but little inferior in Goodness for making of Malt, which gives an advantageous Opportunity, to a Person that thinks fit to make Malt of it, to enjoy its Ale or Beer at a low Price.

Fourthly, This Wheat-Malt has an admirable Quality in it, that no other has, and that is, the Drink of it will never be windy, which is a pernicious Quality inherent to most other Liquors, and is very unwholesome in Barley and other Malt-Drinks; but this, whether in Barrel, or Bottle, and kept ever so long, will always be free from that mischievous Effect.

Fifthly, The Goodness of this Malt discovers itself in making more potent Ale and Beer, than any other Sort can; for if eight Bushels are allowed to a Hoghead, and such Liquor be made too free with at only nine Months Age, it will be very apt to intoxicate, but with less Prejudice to the Health of the Drinker, than any of these unwholesome Barley-Malt

Malt Liquors, whose Bodies are too commonly loaded with large Quantities of that pernicious Acid, Yeast.

Sixthly, This Malt is best made when it is managed by the Workman with Carefulness and Labour, soak'd in good Water, and to have its due Time in the Cistern, Couch, and Kiln. This is the main Art of making Malt; because where it is work'd too fast, and too hot, such Malt will certainly fail answering our Expectation. And so it will if the Wheat by Wets has first grown in the Field after reaping, or heated too much in the Mow; for then this, as well as Barley Malt, is very apt to rot in the Couch; and when it is laid on the Kiln to dry, it must be spread thin, and have a leisure Fire; otherways this Malt can never be well made, which reminds me of an Inn-keeper's Answer, (who brewed his own Drink) when I ask'd him the Reason why his Drink was so bad: He reply'd that it was the Fault of the Maltster, who would not allow the Malt a due time on the Floor nor Kiln. And so it is sure enough with too many of them, who, to save Time Labour, and Charge, run off the Malt too fast to be well made: But if you'll have Wheat-Malt in a right Condition, it must have a due Time on the Floor, that it may spire gradually, and a slow Fire in the Kiln, that its Flowery Part may be soft and in full Body: Then its fine spirituous Balsamick Qualities will be preserved in the Malt, and be communicated to the Drink, whereby it will answer those Ends that I have here propos'd. In short, the Ale or strong Beer made with Wheat-Malt is thought by many that have proved it to be the very best of all Liquors.

Of Water for Brewing Wheat-Malt.

This Element is particularly to be regarded as it affects Brewing; because there is no making of good Drink without good Water, be the Malt ever so kind in itself; nay, it is of such Consequence with Regard to our Diet, that as an eminent Physician has lately observed, we cannot be too Inquisitive into its Nature and Difference; nor too Sollicitous and Nice in our Choice of it; and therefore charges the Inhabitants of our great City with a gross Neglect in this Respect, for chusing of stagnating impure Clay Well-water for brewing of Beer, and making other Drinks.

Of Brewing Wheat-Malt.

The Art of Brewing well, next to good Malt, Water, and Hops, is certainly of great Consequence; because let a Person have all these in their full Perfection, yet he may easily spoil and marr all, if he does not understand the true Method of making them into Ales and Beers; and for this Reason it too often happens amongst those that casually hit on the right way at one time, and miss it another, to lay the Fault on the Malt, Water, or Hops, in extenuation of their own Ignorance; when at the same time, they are the sole Cause of the Misfortune for want of due Judgment in this useful Science: I shall therefore here make it plain to mean Capacities, how they may obtain good Drink from good Ingredients.

And, first, I will suppose my Copper to hold Thirty-six Gallons, which is a Size sufficient for an Ordinary Family, and that I am to brew six Bushels of Wheat-Malt, for making a Hogshead of good Family-Ale; for which Purpose I have a good soft Water from a Chalk or Stone-Well, or clear Water
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from a River, Rock, Pond, or from Rain : A Copper full of this, I heat as fast as I can under the Cover of a Peck of the hully Part of the Malt, or of Bran, which will expedite its Heat, and clear the Water ; so that it may be skim'd off for the Hogs, or put into the Mash-Tub with the Water when it is ready to boil or just broke : Then either let it lie till the Vapour is spent, so that you may see your Face in it, or as soon as the hot Water is put into the Tub, put a Pail or two of cold into it, which will temper it at once, and keep the Spirit of the Water from evaporating : Then immediately put five of the six Bushels of Malt into the Tub by degrees, stirring it with a Paddle or Oar just to keep it from balling and no more. When this is done, spread the reserved Bushel all over the rest, and let it remain so two or three Hours. Thus not only the Spirit of the Water is preserved, but likewise that of the Malt, which will surely greatly improve the Drink, by giving it a fine Haugst, or a true Tincture of the Malt : Then turn the Cock about half way, and receive three or four Hand-Bowls full of the thick part, and return it over the Malt, and so continue till it runs perfectly fine ; for on this depends very much the obtaining of clear Drink in the Barrel ; and therefore the nice Brewer will spend it off as small as a Straw, and let it run into the Under-Back or Tub on three or four Handfuls of Hops ; and when four or five Gallons are thus run off, lade over three Handbowls or Gallon of boiling Water on the Malt, and immediately put as much cold Water into the Copper to supply their Place, which will be at the full Heat again by the Time the last are discharged, and so continue lading over hot, and filling the Copper with as much cold Water, till a Copper of the first Wort is run off, which must be set by for some time in a large clean Tub too, and it will take no Damage ; for the
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Strength of the Malt, and a few more Hops will preserve it sound : Then proceed and put over another full Copper of scalding Water by three Hand-bowls full at a time on the Goods, free of any cold Water till all is expended ; which when done, put this second Wort into the Copper by its self, and boil it away briskly for half an Hour : Then put in a Pound of loose Hops, and boil it again half an Hour more ; by which time I will suppose the Wort to be broke enough : But to be more certain in this material Point, you may, as soon as the Wort begins to boil, put in a Pound of Hops in one or two Canvas or other coarse Linnen Bags, and boil them only half an Hour as fast as can well be done, when they must be taken out ; and the Wort kept boiling on, 'till the Particles which will be very small at first, become larger and some ragged ; then it is truly boiled enough, and must directly be put into the Backs or cooling Tubs to lie thin, not above four or six Inches thick.

As soon as the second Wort is out of the Copper, put in the first, and boil it away in the same Manner, and with the same Quantity of fresh Hops as you did the last, taking care to keep back the loose Hops that were first put in to preserve it while in the Tub ; and when the Particles are ragged, dispense it into the Coolers.

Thus you'll give both the Worts and the Hops their thorough boiling in the Copper, and thereby enjoy their fine Flowery and spirituous Parts, and avoid their gross, unwholesome, and Phlegmatick ones ; for without they have their due Cure here, the Drink can never be right clear and good in the Barrel : But observe, that

The second Wort will never break so soon as the first ; and ~~even~~ that will be sooner or later, according to the Nature of the Malt, Water, &c. which is the Reason that a limited Time of boiling must not be

be trusted altogether to, for a true Indication of the Wort's being enough; and therefore it is necessary to make a right Judgment of it, by viewing a little of the Wort now and then in a Hand-bowl, till it appears as I have before mentioned.

I knew a skilful Brewer that never stopt his Cock after it was once set a running, till he had all his first and second Worts run off; which has this excellent Conveniency in it, that the Goods or Grains have then no Power to sour or taint the Wort by its standing on them; a Misfortune that has spoiled many Thousands of Barrels of Drink, brewed after the old Fashion: And when he had thus stopt his Cock, and mash'd up the Grains with such a Quantity of cold Water, as he thought fit for his Small-Beer, he let it stand altogether an Hour in cold Weather, and something less in hot, before he drewed it off; then would boil it half an Hour with some fresh Hops, and an Hour after that by itself; for Small-Beer Wort must not be expected to break at all.

But by some a Cover is made use of, while the Water is heating or boiling in the Copper, and by many while the Malt lies liquored in the Mash-Vat, that the Steam or Vapour mayn't evaporate. I also solicit your Care, on account of the Wort's breaking in boiling, which you may likely perceive, if you slack your Fire in half or three Quarters of an Hour: And then if the Hops are all sunk, the Wort appears clear like Sack at top, and the small Particles play about like knits; then let it boil a little longer, and they'll be as big as Lice with Rags or Flews about them; that are sure Signs of the Wort being boiled to the Heighth; and this will sooner happen, the more furious you boilt it; but if you boil it much longer, it only wastes, and rather hurts it; nor will it work so well in the Vat, nor fine thoroughly in the Cask; because then it will obtain a more viscous Body; for as it comes
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out of the Copper, in such a Degree of Fineness, it will come out of the Barrel. But observe, that pale Malts won't break so soon as Brown, nor the second Wort so soon as the first; and small Wort not at all.

C H A P. III.

Of the good and bad Properties of the Hop.

I HAVE here undertaken to write of one of the most simple and purest of Vegetables, and yet, perhaps, the most abused of any other, both in its Use and Character. The purest, I say, because of the many fine Odoriferous, Aromatick Spirits that the Hop is indued with, as appears by the Sense of smelling on their being rubb'd and held to the Nose, and which are easily communicated to any Liquid, as these Spirits have their Residence mostly in the outward Parts of the Hopp, and are so tender, that they are not to be retained without being ram'd and bag'd to prevent the Air's Attraction, and the Escape that their fine Spirits are always ready to make: And for this Reason it is, that New Hops are so preferable to Old; because, notwithstanding all the Art that can be used, yet with Time will their subtle Spirits be expended in some Degree, and diminished in their Vertue as they lie in the Bag. But when this flowery pure Part of the Hop is singly and rightly obtain'd and incorporated with Ale or Beer, it then administers a most balsamick, opening, and penetrating Quality to the Body of Man, that the Virtuoso's in Physick declare will powerfully purge by Urine: And therefore are a special Remedy against breeding the Stone, as well as a great Strengthenener to the Stomach by its aromatick bitter Quality; and by its discutient and aperitive Nature,
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good in all Obstructions of the Viscera, and particularly of the Liver and Kidneys. It is this Noble Property that gives the Ale and Beer a fine Flavour, and causes that smooth Gust, and pleasant Taste to the Palate, which after a proper Age in the Malt Liquor, every Drinker enjoys both in Mouth and Body, and is the true Homogeneal Quality created for the Service of Man; and not only in the Hop, but in all other kind of Vegetables; to preserve which, the Curious make their Raisin and other Wines, only by infusing their tender Ingredients in Hot Water, as knowing that boiling would extract their worser Part, and evaporate their better: As is also plain in all express'd Vegetables, particularly the Apple, whose first strong spirituous Juice, or Running from the Press, exceeds, for Taste and Health, the Weak gross Parts of the second; and for this Reason it is that Wormwood, Broom, Century, Tanzy, Sage, Carduus, or any other bitter Herbs, ought to be first dried, and then not suffered to infuse above a quarter or half an Hour at most in Wort; for in these there are harsh, earthy, austere Particles that are very ready to be emitted, and the warm Wort will quickly bring forth those worser Parts that will devour, suffocate, and destroy, the fine spirituous Virtues, and cleansing Properties, and then such Drink becomes of a hard, harsh, astringent Nature, apt to obstruct the Stomach, and send Fumes and Vapours to the Head, heating the Body and Blood too violently. And thus it is with the Hop when imprudently used; therefore the common way of infusing and decocting Herbs a long time is injurious to Health. As for Example, formerly they put a Quantity of Wormwood into their Butt-Beer, and there let it lie infusing, or rather rotting, four or six Months, till all the Drink is drawn; whereby the opening, penetrating, brisk, fine Spirits of such Vegetables are totally destroyed, and
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in their room the Beer is impregnated with their terrene and saline Parts, which contain harsh, bitter, churlish, and inimical Properties: For these Reasons, says a Physician, such common Wormwood Beer does not only hurt, but by degrees weakens the natural Heat of the Stomach, and sends heavy, dull Vapours into the Head, and so prejudiceth the Eyes. The Hop also, besides its fine volatile spirituous Part, which is readily extracted by a gentle warm Infusion, and is a most agreeable and wholesome Bitter, has likewise an innate, gross, terrene, and saline Part, which is thoroughly communicated to the Liquor by long Coction or steeping, and is a hot, very acrid, unwholesome, and disagreeable Bitter; yet is deem'd by the undiscerning Vulgar, a good Property. Indeed strong and fierce it is; but so far from being a Virtue to the human Body, that it certainly is injurious and destructive to it, in breeding the Stone and other Diseases: Hence it is, that all Drinks, especially the strong stale Sorts, that have the Hops boiled in them two or more Hours, strike the Palate with a harsh, rough, unpleasant, bitter Taste; and yet it was but very lately that I happened to be in a Brewhouse at *London*, where they wetted about thirty Quarters of Malt a Week, that the Master presented me with a Tankard of his Strong Beer, applauding it at the same time for having six Pounds of Hops boiled two Hours in each Hogshead; which is perfectly heterogeneous to the true Management of the Hopp, tho' he ignorantly extoll'd his Skill in a bad Action; for both in the Hop, and all other Vegetables, 'tis but lost Labour to boil or infuse them, beyond their first pure Spirit: Therefore boiling the Hop afterwards, is not only superfluous, but injurious, and serves only to raise and induce those acrid, bitter, and noxious Particles that so greatly damage the Drink; yet were never intended for the Use of Man, as being hurtful to his Nature, when

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unduly separated from its better and light Parts. How much then does the ignorant Man abuse his Health, when his whole Drink has this second and worser Part of the Hop boiled in it ! Alas ! I cannot help being concerned for my fellow Creature, and pity his supine Negligence in not regarding any Hints of this Nature, when it has been told him ; because ill Customs have greater Power over a Man than Law or Nature, and nothing but a long Practice will convince the unlearned and obstinate Man : But to prove my Assertion plainer : Let any one take a Pot of Beer or Ale, and while it is warming, stir in it two or three Sprigs of Wormwood ; then take it out, and let it drip into the Drink, and he'll find it presently bittered with the true fine Flavour and Spirit of the Herb : By all which, I think, I have sufficiently made appear, that the good Part of the Hop conduces to Health, while the bad Part deprives a Person of it. And so in most other Vegetables there are, surely, healthy and unwholesome Parts, that must be managed accordingly to enjoy the one and avoid the other. — But more of the Hop in my Third and last Part.

But I now I come to treat of the Use of the Hop, as it relates to Brewing. This fine Vegetable therefore I can now affirm, has at last obtained a just Reputation in some Parts of the Nation, under the due Notion of its good and bad Properties, by the Gentleman and Tradesman. As to the first, I know several that have been so nice in its Use, that they allow but half an Hour's Boiling the Wort and Hop for *October* Beer, as the common Brewer (I am told) does his *Dorchester*, as well as several Tradesmen that I am acquainted with : And one Gentleman, more careful than all the rest, is said to boil both, only a Quarter of an Hour : But, in my humble Opinion, they are none of them right yet ; for tho' the Hop by half an Hour's Boiling in Wheat or Barley

ley Malt Wort, has its full time allowed, it I think the Wort has not ; and therefore the several Beers that I have tasted, of several Persons Brewing this way, all of them, to my Judgment, were rather too sharp ; which I impute to the under-boiling of the Wort, as not having its due Cure in Boiling, that naturally renders it in some Degree so with Age, notwithstanding the Hops Power; for if it han't its Cure in the Copper, how should it in the Barrel ? boiling being appointed for the first Digestion of the Wort ; and that will certainly be deficient, if the Cohesive Parts of the soft Wort are not broke and hardned ; then it will answer two great Ends, viz First, when the Wort is so much boiled (which commonly is in about an Hour) that it curdles and breaks into large Particles, it will be capable thoroughly to settle in the Barrel ; without which it can never be truly fine nor healthful, but consequently will be the Cause of Gravel, Stone, and Cholick in some Constitutions ; for that the ropy, tenacious Parts of the Wort, are not comminuted, separated, and discharged, sufficient to make its true Feces, till it has its mature Boiling. Secondly by this Cure of Boiling, the Wort is divided and hardened, consisting of numberless individual Particles, which gives a greater Power to the Yeast by Fermentation, to make an easy Discharge of their excrementitious Parts, and so is more able to resist Eagerness and Putrefaction ; witness the Wort that is brewed for making what is vulgarly called Vinegar ; which being neither boiled nor hop'd, but only fermented, will in a very few Days Time make this Aleager or Vinegar, if it is set in the Sun or by a Fire. It's true, indeed, that the Bitterness of the Hop does naturally hold the sweet Body and volatile Spirits, and as it were captivate them, being their mighty Defender against those keen Properties, that otherwise would advance and devour the sweet mild Qualities : But then, as I take it, this Power

of the Hop is confined only to the State and Condition the Beer is in, when first put into the Barrel; and therefore if such Drink is runn'd in any imperfect undigested State for want of its right Boiling, it will not be improved by the Hop beyond its original Nature.

Now that both the Wort and the Hop may have their due Cure, in the Copper as well as the Barrel, boil the Wort by itself half an Hour, and then rub the Hops well, and put them into the Wort, either loose, or, in a Bag or two, and boil all together briskly till the Wort breaks, as I said before; then strain it into the Coolers very shallow. The Quantity of Hops on this Account for a Kilderkin of *October* Beer, should be, at least, three Pounds to be tapp'd at nine or twelve Months end, according as the Drink is mellowed and the Hop rotted: And so for Ale in Proportion to the Strength of the Wort, and the Time it is to be kept. To please my own Palate, I boil two Pounds of Hops in a Hogshead of mild Ale, the last half Hour, and find it answers extreamly well, tapp'd at about six Weeks end, without Regard to the hot Seasons or Blossom Time in Brewing it, as being under no Apprehension of a Miscarriage, provided my Malt, Water, Hops, Yeast, and Conveniencies are all in due Order. But to be safe in this Management, you may put a little Wort (somewhat cooled) upon the Hops before they are put into the Copper, to prevent what we call scalding them; and then the Hops will emit their Virtues more free, sooner, and regular, than when their Virtue is lock'd up in them by the fiery Heat of the Boiling Wort, there being also a resinous and clammy Nature in the Hop, which is best opened and divided by a previous gentle Heat; or when you have boiled one Parcel of Hops in a Bag half an Hour, as I said before, you may take them out, and boil such another Quantity of fresh Hops till the Wort breaks;

breaks and thus a small Bag may be used in a little Copper, which may not so well agree with a large Vessel.

C H A P. IV.

*Of the Nature, Prevention, and Cure of Tainted
Fox'd Utensils and Malt-Liquors.*

THIS is a most necessary Article in Brewing, and one of them that has been the least taken Notice of by Authors, altho' of the utmost Importance ; because by this Evil, there have been many Thousand Barrels of Strong and Small Drink spoiled, both by common and private Brewers, who generally seem more wanting in this Knowledge, than of any other Branch of Brewing ; and therefore if my Pen can be serviceable to the Publick, in remedying this grand Misfortune, I shall account it a valuable Opportunity of making known what I have learn'd and experienced in this Affair, in order to prevent those great Quantities of distempered Beers, Ales, and other Liquors from coming into the World for the future, as has been for many Years past, to the great Damage of the human Body ; because when these Drinks are thus tainted, they can never be made thoroughly sound and fine in the Barrel ; but will remain always in a nauseous, unhealthy, thick Condition, and be offensive to the Taste and Stomach ; which undoubtedly will contribute to the Breeding of Diseases ; and that by Reason the Misfortune consists first in the tenacious Thickness or Ropyness of the Drink, and the evil stinking Scent that arises therefrom , which has brought it under the Denomination of being foxed, and, indeed, is justly deserving of that or a worser Comparifon. Now to account
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for this Disaster, it is generally allowed to proceed from six Causes: First, from the Nastyness of the Utensils. Secondly, by the Filth and Corruption of the Water. Thirdly, by taking the Liquors in wrong Heats. Fourthly, by the Mustiness or other Damage in Malt. Fifthly, by the Wort's lying too thick in the Coolers. Sixthly, by letting them too hot into the Tun, or fermenting them while they are so. By all which, or by any one of these ways, may this abominable Sicknes in Beer or Ale be bred; as new Milk is soon turned and spoiled, when put into unclean Pans; for this, like Wort, is of a pure Nature, and therefore the least Nastiness is, in some Degree, prejudicial to them; because all Dirt, Sullige, and Fur, that is left in the Crevices, and on the Sides of the Tubs and Utensils, contain in them a certain Acidity, that, like Rennet in Milk, sours and turns the Wort, more or less, from its thin, pure, loose Parts, into a foetid, stinking, Treacle Consistence, which commonly remains in it to the last, and will rather increase, than decrease; so that such Beer or Ale can never be made truly sweet again by the Art of Man; but, as such, will taint and poison the Coolers, Tuns, and Barrels in which it lies; for I have known it so Predominant, that it han't been got out for a Week or more together, to the great Prejudice of both Seller and Buyer: And sometimes I have heard of a whole Guile together of Strong Drink having been turned down the Kennel, as not fitting (when the Taint is in a great Degree) to be carried to a Customer's House: But to cure this horrid Misfortune, some are so silly among the private Brewers, to wash their Tubs or Coolers with only boiling Water, as thinking it the readiest way to scald it out; but, in Truth, it is scalding it in; for Boiling Water does only drive further back into the Wood a certain sour, fulsome Quality that the former Wort left behind, and which the Wood
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of the Coolers or Tuns has suck'd in, the Humidity, or sweet Quality that the Wood receives from the Wort, presently turning sour, very sharp, and keen, especially in the hot Season of the Year; so that when the fresh, new Wort comes into such Coolers and Tuns, it does most eagerly and powerfully attract and draw forth that lurking, keen, sour Quality that the Wood has imbibed and retain'd; which will occasion the whole to become sometimes only prick'd, or just tainted, and hardly perceivable to the Palate; but at other Times, when the Beer or Ale is infected very much, it is unsufferable both to Nose and Palate; and then such Drink will soon be sour: And this is one great Reason why such Quantities of Malt Liquors taste so mawkish, raw, and soon decay. And I myself, about twenty Years ago, had no other Knowledge to extirpate and drive out this Enemy, than to scrub the Backs and Tuns with only Coal Ashes and cold Water; whereas, in Truth, the Disease lies farther in the Wood than many imagine; and therefore is not to be got rid of very quickly, by such a palliative Cure: No, the Remedy must be according to the Disease; for in the Bottom of all Backs, Tuns, and cooling Tubs, there are Joints, down-right Pegs, or Dole-pins, which often receive and harbour the tainted Wort and Drink, and which are mostly imperceptible to the Eyes: 'Tis in these, I say, that the Distemper chiefly lies, and damages the succeeding Worts; for these Pins and Pegs are frequently swell'd by Wets, and dried again by the Air, and so are the several Joints, whereby they first receive, and then hold such corrupted Worts. Now as there is the Depth of an Inch or two in many of the great ones, it must be supposed, that a hasty scrubbing their superficial Part with only Coal Ashes and Water, is not soon capable of routing such a potent Enemy, whose nasty venomous Acidity and poisonous Nature, lurks in

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in the most subtle, difficult Places of the Backs, Tuns, and Tubs : Therefore some will put Stone-Lime over good Part of their Bottoms, and Water over that, to lie two or three Days and slack, in order to burn the Taint away ; which may do some Good : But then, as the Water and Lime acquires a plaistick Body, it becomes too thick to enter into the close Joints, and about the Pegs, as a thinner Body can ; and therefore I shall prescribe, I think, a much better Way, and that is: Take a Parcel of Wood Ashes made from Ash, if they can be got ; because they are the whitest, sweetest, and strongest, (but any other may do) and boil them in Water to a strong Lye, or Lee ; the Liquid Part of which lay over the Bottom of the Back, Tun, or Tub, scalding hot for some time, that it may have an Opportunity to soak and penetrate into the Joints and Peg-holes ; then with a Broom scrub the Sides and other Parts of them : This will be an effectual Cure each time it is used, if it is thoroughly done ; because of the great Quantities of searching fixed Salts, besides Sulphur, that is contain'd in the Ashes, which are contrary to the Nature of this Disease, and will prove a true Antidote ; and if the Coolers, Tuns, or Tubs, are after each Brewing wash'd and scrub'd out with cold Water, and then with this scalding Lye, it will prevent and cure this Malignity better than Lime, Wormwood, or most other Methods : For it has been found, that a Lye Tub, tho' generally neglected as the worst amongst the rest for a Cooler, has really proved the sweetest and safest of any for that Purpose ; provided there be no Soap mixed in it ; if there is, it will surely fox it.

What Consequence then must the Knowledge and Cure of this Evil be to those, that through meer Ignorance and Obstinacy, have brewed for several Months, nay, I believe I may say Years, in tainted Utensils, without so much as a Jealousy of the Misfortune

fortune they have actually laboured under. It's true their Drink is sometimes better, and sometimes worser; because they are not always under the same Degree of Taint, but are never thoroughly sound; yet because their Backs, Tuns, or Tubs are not rankly damaged, all goes off under the Supposition, that it will be better next time; which has been the true Reason that many home-brewed Ale-house Liquors, have justly bore the Name of bad Drink, and yet the Brewer so ignorant as not able to account for it.

I once knew a Person that had only a Hogshead Copper in *London*, and entered himself at the Excise-Office a common Brewer, that he might have one in the score allowed him free of Duty, so at a Loss, that he had a constant Fox in his Utenfils for two or three Months together, little or more, and which must have terminated in his great Loss, had he not had the good Fortune to be a Partner in a great Brew-house.

I also knew a Country-Victualler that brewed two or three times a Week, constantly foxed in his Tubs, and Barrels; but that was more than he knew himself, or would know; yet by his putting a great deal of Malt in his Drink, and the Ignorance of the Drinkers, this unskilful Brewer went on, and had his Share amongst others that better deserved.

Another way to cure foxed or tainted Utenfils is, to take Bay Salt, and put it into your Coolers, Tuns, or Tubs, and strew some on their wet Sides; then upon that scalding Water, with which when they are well soaked, scrub them very well. This Salt is allowed to be stronger and sharper than the common Salt, and as such will penetrate and enter into the minutest Joints and Pores of the Wood, where it will eat in, and eradicate the nasty venomous Particles of the corrupted Taint, and make a greater Cure at one Application, than Ashes and cold Water.

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will at several ; so that Brewers, great or small, need have no Apprehensions of being damaged a second Time, by the succeeding Worts or Drinks, if they will make a due use of the Rules in this and my first Book, and of this famous Receipt that has often been try'd and approved of, for answering this Purpose, by several eminent Brewers : This Salt, which is of a hot moist Nature, is that with which they make their Camp Cellars, by mixing it with Clay, to keep their Wine and other Liquors in ; this Salt being only the Sea Salt-water candied or coagulated by the Sun, will preserve the Body of the Clay a long time in a State of Humidity, and so prevent its hardening and cracking, whereby the Liquor contained under its Cover, will be in a fresh cold Condition in the hottest Seasons, as I have hinted in my first Part, for making Pots of Clay with it to stop Vessels. Again, besides the Infection that lies in the Backs or Coolers, Tubs or Tuns, it often extends itself, by tainting the Insides of the Leaden Pipes and Brass Cocks, thro' which the Wort is convey'd into the working Vat, or Tun, and there will lie and do Damage to the succeeding Worts, if not extirpated here also. To do which put some of the same Bay-Salt into the Mouth of the Leaden Pipe, and pour scalding Water on the same, and let it lie and soak some time, and you will find it effectually eradicate all Damage out of the same. Others will wet the Bottom and Sides of Tuns, and strew the Bay-Salt all about to it, and let it lie till next Brewing and soak.

C H A P. V.

Of Working or Fermenting Malt-Liquors.

IN my first Part, I think I have sufficiently detected the Male-Practice of beating or twacking the Yeast into Malt-Drinks : But as this vile Practice has got too

too much footing at this time in the World, to be soon exploded, I have thought it necessary to resume this Subject, and to say, that all violent Fermentations are unnatural to Malt-Liquors; because by any furious workings, the sharp earthy Particles are irritated and brought into Agitation, which should by no Means be stirred up, by reason they spend and destroy the pure, fine, sweet Spirits, and consequently cause the Beer or Ale to become Stale or Vapid the sooner. But many are so far from thinking this an Extream, that they promote it with all their Power, and force and beat the Yeast into the Body of the Drink for a considerable time together, with repeated Mixtures; which, as I have already observed, is generally done out of a wicked, avaricious End, to make six or seven Bushels of Malt go as far as eight or nine; and therefore 'tis a great Pity there is not a Penalty inflicted by Law on this Practice, as well as there is for using Molosses, in a Brew-house: For if the Truth was known, I believe the greatest Evil is on the Side of this destructive modish extraordinary Incorporation of the Yeast with the Beer, and all (in my Opinion) for the sake of thus rapaciously impregnating the Salt and Sulphur (two fiery Qualities) with the Liquor, that it may attack the Brain with its volatile Potency, and so impose a Credulity on the ignorant Man, that it is the pure Virtue and Strength of the Malt; and thereby it has induced many a poor Man, that works hard for his Shilling or Eighteen Pence a Day, to return the following one, for a Hair of the same Dog, to the Impoverishment of his necessitous Family, as I have seen it often done in the Country; and as my Discourse has had some Effect this way, I hope my Pen will have a great deal more, towards the Suppression of an Evil, utterly unknown to our prudent Forefathers; but thoroughly pernicious to many in our Time: For it's plain, that this ill-

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forceable Usage in Malt-Liquors, by beating the Yeast into them, clogs and detriments the fine penetrating Particles ; so that in this Sort of Fermentation, the gross excrementitious Matter, cannot separate from the finer Parts, by which Means it will retain a strong, gross, fulsome Sweetness ; which, instead of being avoided as a very great Enemy to the Health of Man, many of the Vulgar People admire, and count it good and nourishing ; when, in Truth, such Liquor fails not to sur, foul, and obstruct the Stomach and Passages, sending back dark, dulling, Fumes and Vapours into the Head, and also generates an hard fabulous Matter in People subject to the Stone and Gravel ; therefore let both Men and Women refrain such Malt-Liquors, if they have any Respect to their own and Childrens Health.

It is the Advice of an eminent Person in Knowledge and Practice this way, that the lightest Fermentation or Working of Ales or Beers, is the most conducive Way to Health ; and that all heavy Fermentations are heterogeneous and unnatural to the Drink and Body of Man : For tho' the common Way is to tun Drink, when it begins to fall or ferment more gently ; yet then it will come under a fresh Fermentation in the Barrel, that oftentimes causes it to work again, as fierce as ever, which is apt to make it fret and spend itself ; for long or fierce Working, makes all Drink grow sharp and stale, sooner than when the Fermentation is moderate and regular : It will, indeed, in such Case become fine somewhat sooner ; because the volatile Spirits, or sweet Body, is wasted, or rather turned into Sharpness by too long and fierce working : Therefore those that have a Mind to avoid these Inconveniencies, ought to tun or put up their Drink young, as the Brewers call it ; that is, before it hath fermented too much, *viz.* so soon as the Drink works, it ought to be put into the Vessels ; and you need not doubt but it will work sufficiently,
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Nay this Gentleman carries his Opinion further, and says, when your Wort is thoroughly cold, mix your Yeast well with it, and put it presently into the Vessel, and it will do extraordinary well in warm Weather; and if in Cold, Allowance must be made accordingly, by putting the Yeast into it blood warm. But how contrary is this healthful Way to the Practice of many who load their Ales in particular, with Quantities of saline, sulphureous Yeast; and that their Drink may have enough of it, they sometimes make Additions of fresh Parcels in the Time of Fermentation. About the Beginning of *June* 1733, I happened to be in a common Brew-house, and saw a square Tun with Drink in it under a violent Fermentation, which induced me to ask the Man how long it had been there: He told me from *Friday* to *Tuesday*; and that latterly he had been obliged to beat the Yeast in it every two Hours to keep it down. At another's I saw several square Tuns that were about four and a half, or five Foot deep, that were so built, as to admit of loose Frames of Boards fastened on all Sides into them, to allow for the great Risings of their Heads of Yeast, before they beat or whisk'd them in, which would be elevated sometimes several Feet higher than the fixed Tun. Here was Adulteration with a Witness; here the fine Spirits of the Wort were entangled, imprison'd and choak'd, that should have been cherish'd, nourished, and digested, with all the Moderation and Freedom possible, and in their room the hot, salt, Brimstone Spirits of the Yeast substituted and made Predominant, to a horrid Degree of Degeneracy indeed. But according to the Proverb, *One Man's Mistake, is another's Game.* — Remarks: —

I cannot say this Person is intirely right in advising to Tun the Drink so young, as when it first begins to work (unless it be Small-Beer); but when the Ale or Beer has been work'd as cool as possible, to let it
have

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have a Digestion first in the Tub or Tun ; and when it is arrived to a fine curled white Head, then to put it up as soon as it can be done, is a good way ; because if it does not thus ferment first in the Tun, the Coldness of the Cask and Cellar in Winter, would be apt to check and hinder it doing so in the Barrel. Bt as he was a Physician, he directs this early Barrelling up the Drink, to be the most healthiest way of all others, and very likely it may be so. But be sure never to fill up the Vessel again with what has worked out.

C H A P. VI

Of Recovering prick'd, stale, and damaged Butt and other Malt Drinks.

I Was told by a credible Person, who was concerned with a great Brewer in *Westminster* about forty Years ago, that he made a Tryal to recover some stale prick'd Butt-Beer, that was return'd by one of his Customers, and began after this Manner: First, he ran off a piece of strong Wort ; then he put some fresh Malt on the Goods, and over that the damaged Beer ; that he let stand some time on the Goods and Malt : But instead of bettering it, it came off a Small Beer to his great Surprize ; for, as he told the Story, the Rich robb'd the Poor ; because the Goods absorb'd the strongest Part of the Drink, and emitted only the smaller Part, as white Loaves in an Oven, when mix'd with the brown Sort, will take from them, but the Brown not from the white.

A second Case.

Another Person, who was a Victualler in the Country, and brewed his own Drink, I personally knew

knew that acted in such an Affair about four Years ago ; but after a different Manner. He first boiled his Water, and put it over four Bushels of Malt, by a Hand-bowl at a time, as usual ; and so soon as a small Quantity of the first Wort had run off, just to take away the loose Flower of the Malt, he put over three Hand-bowls full of the damaged Beer cold, and when it was all discharged, he put over two Hand-bowls full of boiling Water, that also ran off without stopping the Cock at all ; and so on, a parcel of the Stale-Beer, and another of hot Water, till all the Strength of the Malt was thus washed out : And thus he served another four Bushels of Malt till all his damaged prick'd Stale-Beer was cur'd, and brought again into a mild pure State by Fermentation, as at other Times. And is an excellent approved way.

Remarks on the above-written Cases.

In these two Cases the small Brewer appears to be the greatest Artist ; because he improved his Drink, when the other was spoiled by Mismanagement ; for it is well known, that several spongy Bodies are, by their Make and Textures, a Propo for straining or refining Liquors ; and amongst others, a Body of Malt confined in a Tun or Tub, will answer one such End and Purpose, as is apparent by returning and putting over several Hand-bowls full of the first Running of the Malt, which is commonly thick, in order to receive it back again thin and clear ; so also will a Flannel Bag fastened about a Hoop, discharge foul Malt-Liquors as transparent almost as Sack, and which are used in all great Brew-houses, for straining the Dregs and Settlements left in the Backs or Coolers after the Worts are run off.

In the great Brewer's Operation I conceive he committed these Mistakes : First, by the Heat of the

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the Goods, and the Beers lying amongst them an Hour or more, the agitating Parts of the Yeast contained in them were stirred up, and brought into a small Fermentation that disordered the whole Body of the Malt: The Stale Quality also of the Beer, I suppose, in some Degree might constringe and lock up the Pores of the Malt with its gross and sharp Properties, which caused it to emit a thinner Body than it receiv'd: Whereas all such Drink put over the Goods, should be directly run off with an open, small, continual Stream; that the Beer might have less Power to stay, astringe, and ferment the Goods, and thereby better prevent the Retention that their hollow Grains naturally make of the gross Part of any Liquor.

Secondly, here was an Omission of pouring on scalding Water after the Stale Drink was run off, in order to wash away the glutinous, gross Parts that the Beer had left on the Goods, which was to have prepared it for the Reception of the next Lading over more Stale-Beer; that the small Brewer very judiciously did, and by his alternate Additions of cold Stale-Beer, and scalding Water, he each time kept his Goods in right Order, so as to prevent their being clogg'd with the heavy thick Parts of the Beer; and thus recovered his damaged Drink. But then in this Case I must remark, that the small Brewer had the Advantage of the great one, in his Brewing of only four or eight Bushels of Malt; for here he could put over the several Parcels of Stale Beer and Water at Pleasure, which the great one could not so well, by Reason of his large Copper, Mash-Tun, and limited Times of Brewing; for in this Affair, there is a great deal of Leisure required, to give time to the Stale-Beer and Water to run off in a small Stream, that the Liquors may have the more Time to bring away with them the Goodness and
Virtue

Virtue of the Goods ; otherways the damaged Beer cannot have a perfect Cure. And if there is a Quantity of such Drink to be cured, it may be done by repeating the Brewings till all is over. But here may an Objection arise, that such Drink may be thorough clear and fine ; and that there is no Yeast nor Foulness to cause a Fermentation and clog the Goods. To this I answer, that all Drinks that have passed a Fermentation and Digestion by Yeast, are tinctured and incorporated with it ; and tho' the Drink is aged, yet will the Effects of the Yeast remain in its Body in some Degree, and cause such a Fermentation ; as may be perceived by the thick Froth of Malt-Liquors, when only warmed over the Fire for present Drinking. But admit there was not the least Yeast in the Drink, yet such strong Malt-Liquor has a much grosser Body tho' ever so fine, than Water ; and which consequently will hinder it a free Percolation through the spongy close Grains, that like a Sieve will keep back the Sisy Part of the Beer, and transmit a thinner Liquor, as it happened in the great Brewer's Case.

A Third Way.

Take three Pounds of Hops that have been boiled in a first Wort only half an Hour ; and as soon as they are cold, put them into a Hogshead of prick'd or stale damaged Beer or Ale. Then take two Pounds of pure soft fat Chalk ; break it small, and put it likewise into the Cask ; and if the Drink is not too far gone, it will fetch it again into a smooth Mellow fine Condition.

A Fourth Way

Is done by mixing new Drink with the old ; but in this there is required a particular Management ;

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for if too much of the stale prick'd Drink is incorporated with the new, it will not answer your Expectation; therefore observe to order this in a due Proportion; let there be one Gallon of such Stale Beer mix'd with three Gallons of new at least, that the latter may have the greater Power; for it is by such superior Force, that the acid sharp Qualities of the Stale, are overcome and reduced into the smoother Nature of the new, and thus it will bring the whole Body of the Mixture under a new Fermentation, that will both clear, fine, and soften it: An instance of which I knew done in a Kilderkin that had about six Gallons of Stale hard Beer a little prick'd. To this was put ten Gallons of new that work'd it well, and at six Weeks end, when the Cask was tapp'd, the Drink proved very clear and good.

C H A P. VII.

The Receipt for Brewing Dorchester-Beer.

Boil the Water and let it stand, till you can see your Face in it; then put your Malt in by Degrees, and stir it; let it stand two Hours; then leak on your Complement: Boil the Wort and Hops thirty Minutes; cool it as soon as possible, stirring it that the Bottoms may be mingled; then set it in the Guile-Tun, till it gathers a Head, which must be skimmed off; then put in the Yeast, and work it till the Head fall; then Tun it, keeping the Cask filling up so long as it will work.

Remarks on the Particulars of this Receipt.

This Receipt came to my Hands from a Physician who has a Name for being curious in Malt-Liquors: However, I shall make my Remarks on its Particulars,

lars, for the better Understanding of the Nature of the Ingredients, and the several Methods here prescribed for their Uses. And first, I am informed, that at *Dorchester* they lie on a Chalk, which may afford a good or bad Water. If it is soft, and it will easily lather, it then is excellent for this Use; but if it is hard, creekly, and curdling, it is as bad; for Experience has proved, that astringent or binding Waters are not agreeable, notwithstanding the common Use they are put to in Brewing Malt-Drinks; because their hard Qualities will still remain in the Beer or Ale, and affect the human Body accordingly: For tho' it has passed several Digestions in Brewing; yet will not the mineral Nature of such Water be totally destroyed, as is evident in the Taste of Beers and Ales tinged by them, that will still communicate the bad Properties of such Waters to the Palate and Body, after having lain many Months in the Barrel: They also naturally give a sharper Taste, and induce Staleness in Drink much sooner than the softer Sorts; and if there are any unhealthy Qualities in them, or in the Malt, Hops, or Yeast, they are the sooner and faster fixed in the Body, as their astringent binding Properties have more or less Power.

It says that the Water is boiled.—It's true, according to the old Way among the private Brewers, this Method is followed: but by the more intelligible Sort, it is not; but only so much heated as to be ready to boil, or at most just broke into Boiling; for the longer it boils, the weaker it is, and the more unfit for Brewing; because the Spirits of the Water would evaporate away in the Steam, which ought as much as possible to be prevented; and therefore in great Brew-houses at *London*, they are right in this Article of not boiling their first Water or Liquor to the Expence of its Spirits, which are truly worthy of Conservation as they tend to the Preservation

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vation of the Drink, and giving it an agreeable brisk Flavour to the last.

Letting it stand till you can see your Face in it, — Is what I must own is generally practised throughout the Country, as an Indication that the Water is in a true Temper to receive the Malt; but in this also I cannot commend the Country Method; for if the Water did not spend itself in the Copper by boiling, it will now in the Mash-Tub, and there be deprived of its Natural Spirits in Steam, that here have an Evaporation for a Quarter or more of an Hour: But to be more particular in this Point, I cannot but think this Invention was first contrived to supply the Ignorance of the Brewer, who indeed is by this Means under less Hazard of committing a Mistake, than if he was to do as the *London* Brewer does; who, instead of staying till the Water cools in the Copper, lets in a Parcel of cold Water directly; and thereby brings all his Liquor into a Temper at once, and so prevents the Mischief that boiling the Water would do. But this is a Piece of Skill that every one is not Master of; and to such the old way is preferable.

Then put your Malt in by degrees, and stir it. — This has been such a random Direction in Receipts of this Kind, that I never met with a Brewer in my Life, either great or small, that I ever heard dispute about this Matter, or even mistrust there was any thing in it beyond common Management: But I am sure there is considerable, as I have constantly found by Experience, tho' their Mouths are frequently full of disallowing what is generally called a Pudding-Consistence in the Malt; and that such a Misfortune is only brought to pass by one particular way, *viz.* by scalding the Malt, which I own may be done: But I can now assure them, it may be done another way, and that is, by mashing the Malt too long; and then the
Brew-

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Brewing is never truly Natural where the Water is put over by the Hand-bowl, or what is called lading over; by reason the Malt then will lie in so heavy and close a Body, that the hot Water can't have so quick, free, and easy a Circulation about all the Sides and Parts of the Malt, as when it lies looser: And therefore, when the Malt is put into the Water, it should run but slowly, and be stirred as little as possible; I mean no more than needs must to keep it from balling; and then the Water will have free Access to all the light Body of the Malt. It's true, this most serviceable Nicety does not affect the great Brewer in his large Quantities of Malt, or where the Water ascends through a false Bottom, and the great Oars are used several Times in a Brewing; because they don't here lade over by degrees, but mash all at once. However, every one to their Convenience and Mind; the Lading over by degrees pleases me best.

Letting it stand two Hours. — This is soon said and writ; but there is more in the Matter than at first seems: The letting it stand two Hours, is a very good Way to give the Water Time to enter the Pores of the broken Malt, and extract its Virtue: In this Respect I approve the Country's Method beyond that of the Brewer, who generally lets it stand only one Hour; but I like his Way best, that caps the Malt or Goods: That is, so soon as the first Mash is done, he puts some fresh Malt spread over it to keep the Spirits in, and prevent their Escape in Steam, which is an excellent way to give the Drink the true Flavour of the Malt; that it will be sure to do, if it thus lies two or more Hours under Cover.

Leaking over. — Is what may be called putting over the Malt at times, many Hand-bowls of Water; that it may run gradually off, and wash away the Flower of the Malt by a slow degree, that the Vir-
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ture of the Malt may be leisurely extracted ; which is more natural, and much better, than by hasty Proceedings ; but this I have said enough to elsewhere.

Boil the Wort and Hops thirty Minutes. — This Article I would, if it was in my Power, reform in the first Part, but not in the latter. I am very sensible that the first Publication of the Hops true Nature, has done a great deal of Service in the World towards the Enjoyment of more wholesome Malt Liquors than heretofore this Nation usually enjoy'd ; and I would contribute the best of my Power, that the Wort may have also its Cure as well as the Hop : And therefore I advise, that the Wort, instead of being boiled half an Hour, may be boiled briskly till it's broke enough ; which may easily be done, if it boils but half an Hour before the Hops are put in, and then boil it longer with the Hops in ; or put in the Hops at the first boiling of the Wort in one or two Bags, and after half an Hour, take them out, and boil the Wort on by its self : Thus both the one and the other will have their due Cure : For in my Opinion, it ought to be established as a general Rule, that no fresh Hop ought to be boiled above thirty Minutes in Wort, nor the Wort boiled less than till it breaks into large Particles ; for if they are, I am sure the Liquor must suffer in some degree ; first, by the nasty, earthy, gross Parts of the Hop ; and secondly by the Wort's being raw, and not thoroughly digested.

Cool it as soon as possible. — This answers Nature's End in the best Manner ; for Wort can't be too cold to work, if it can be made to work at all : By this Temper it is, that the Wort is prevented fretting, and the fine Spirits of the Malt dissipated ; all violent Fermentations being an Enemy to Nature, and are often the Cause of sudden Staleness and Sour-

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Sourness ; for which Reason Brewers dare not take the same Liberty in Working of keeping Beers, as they do in the common Brown and Pale-Ales that are to be drunk directly ; because it would be in Effect forcing of Nature beyond her genuine Motion, which is the best Dictator, and proves herself most improved, when she is most gradually managed and assisted ; and therefore the Art is so to work all Malt-Liquors, that the Salt and Sulphur, with which they abound, be kept in a due Regularity.

Stirring it that the Bottoms may be mingled.— This is very particular indeed, and contrary to the Practice of all *London* and *Country*. Brewers that I ever knew : For in *London* the great Brewer takes great Care to leave the Dregs and Sediments behind in the long fixed Backs, and draw off their Worts from them as fine as possible, as thinking such gross Feces would prejudice the Drink, especially the keeping Sorts : Indeed it must be allow'd that foul Sediments as they subside the Thickness of one, two, or three Inches in a Butt, will become a Feed or Subsistence to the Beer for some time ; but then let it be considered, that by putting all the Sediments into the Cask along with the Beer, the worst Part of all that is loaded with the gross earthy Salts and Sulphur of the Malt, Hops, and Yeast, are here reserved in the Beer to the last ; whose harsh, earthy Qualities being very unwholesome, will not fail to communicate their rough Properties to the Drink, and on Change of Weather be very apt to disturb the Body of the Beer ; and bring it under a Foulness and Staleness sooner than ordinary ; for as the Feed is, such will be the Nature of the Malt-Liquor. The greatest Artists that have had a regular Learning in the Art of Brewing, allow that Drink, tho' it be ever so fine, put into the Guile-Tun out of the Coolers, will carry with it into the Cask such a share of Matter, as will become a sufficient Feces
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for feeding the Beer some time, if there is Malt enough given it: But where that is doubted, and that the Drink may be further improved, any of the Compositions, or rather the Balls, mentioned in my first Part, may be used, which I have experienced to be excellent for this Purpose, and are of a much more preserving, fining, and wholesomer Nature, than the foul natural Sediments of the Drink.

Then set it in the Guile-Tun till it gathers a Head, which must be skim'd off. — It's very likely a Head Will arise in the Guile-Tun, where all the Feces are put in with the Wort; because the Salt and Sulphur of the foul Dregs, will give it a Sort of small Fermentation, and cause a Cream to appear in a Head, which he says is best skim'd off, and so do I; for it is a Sort of Excrement that the Wort discharges of itself; and the less there is of such left in the Drink, the better it is. But I never like to see Wort have a Cream on it before the Yeast is put in; for oftentimes this is a Presage of the Fox.

Then put in the Yeast, and work it till the Head fall. — This must be done without all doubt, and should be work'd as cool as possible; and when it has got to a good Head, to beat the Yeast in only once, and cleanse it into the Vessel, is the best Way of all others for keeping Beers. By this the Drink will have its Body fully opened with a due Fermentation, that is perfectly necessary to make it fine, and drink clean and light. I knew three petty Brewers of three Minds in this Respect. One said, draw off the Drink by a Cock placed six Inches above the Bottom of the Tun or Tub that the Sediments may be left behind. A second said, do that and skim off all the Yeast besides. A third said, put Beer, Yeast, and Sediments all into the Barrel. Now let us examine which of the three was most right. The first, had surely, a true Notion of the Matter; because it
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is these Faces that would afterwards cause a violent Fermentation in the Barrel, and bring on Acidity, and Staleness in keeping Drinks: And to hinder their incorporating with the Beer is the way to have fine Drink. The second that was for taking off Top and Bottom, declared himself more in the right than any of the three; for that there would be Yeast enough left in the Drink to cause a Fermentation in the Barrel, notwithstanding the Top and Bottom are taken off before. But the Third, I think, wholly in the wrong, that would have all put into the Cask; for then by Consequence there must be a violent Fermentation excited, while such Drink abounds with the Salt and Sulphur of its additional Yeast, and Dregs of its own Body; that are two Principles of such a sharp, fiery Nature, as are easily put in Motion, even by the very Influence of the Weather; and which is the Cause that such Beers are so frequently disturb'd on its Changes, and become stale, thick, and sour in a little time.

Then run it, keeping the Cask filling up so long, as it will work. — A very good Way, indeed, and what is consonant to the best Management in Brewing; and for that Purpose some of the Drink is kept out by way of Reserve for this Use, having a thick Head of Yeast on it within about two or three Inches of the Top; which will greatly contribute towards keeping in the Spirits of the Drink; for I think there cannot be too much Security taken for keeping in the Spirits of the Drink, which are constantly upon the Wing, and ready to fly away upon all Occasions; and then such Drinks will soon become vapid, stale, and sour. But there is a most contrary Way practised by some Publicans that I know; and that is, when the Drink has done working, and the Yeast duly settled, there will be a thick Part and a thin Part; now as to the thin Part, these Sort of avaricious People carefully run as clear off the Tub or Pan,

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that

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that it is catched in as possible, and returns the same into the Cask, reserving only the thick Part out: This is another horrid, nasty, unwholesome Part of Brewing, that is worse than what I have complained of before, of beating or thwacking the Yeast into working Ale or Beer; for this is the very Tincture or Quintessence of that poisonous Excrement, and is so opposite to the sound Nature of Drink, and the Health of the human Body, that in the first it will immediately infect the whole Cask of Malt-Liquor with its fulsome Taste, and in the Drinker cause a Squeamishness or Sickness in the Stomach and Head for some time after, and often violent Cholicks. But according to the Proverb, What the Eye never sees, the Heart never rues; for were the ill Effects of such Liquor truly known, I don't suppose the very necessitous Man would take it into his Belly, that could possibly satisfy Nature any other way; because in very Truth, Drink thus poisoned, as I may in some Measure call it, with the most corrupt refuse Part of the Beer and Yeast, is only fitting for the Hog-Tub, or which is much better, to be thrown down the Kennel; for there it will do least Harm. It once happened as I was drinking at a Publick House in a Village, among other Discourse, the Brewer very frankly own'd, he always took particular Care to let the Yeast settle after it had work'd out of the Barrel; and then poured off the clear or drinky Part into his Vessel. On this I told him some of the pernicious Consequences attending such Mixture. His Answer was, That truly he had paid Excise for it, and he could not afford to lose it. This was only one I accidentally found out; but I do not in the least doubt, but there are Thousands in the Nation besides, that are guilty of this adulterous Part of Brewing; and then it is no Wonder that Cholicks, Stones, Gouts, Vapours, and Consumptions, &c. are so rife as they now are: Nay, the dead Drop-pings,

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pings, or Leaking of the Tap, are put by several into a reserved Cask, to digest and recover itself with Time, and then become saleable Drink ; but this I likewise detest for it's nasty, vapid, unhealthy Quality that it contracts in the open Tub, exposed sometime to the Air, and other incident Corruptions, which must necessarily retain a filthy Nature, tho' confin'd two or three Months in a Vessel afterwards. And therefore I am incited to take Notice of the Hardship, that such Publican Brewers lie under of being forced to pay Excise for such excrementitious Drink, and thereby tempted to prejudice the Health of the ignorant Drinker, for the sake of reimbursing themselves of the Duty, and which, I think, should be a moving Consideration to an Officer to take care of oppressing the Subject with Overcharges in Gaging, that I remember too frequently happened to me, when I was concerned in the Publick Brewery. And as I thus write in Vindication of the Subject, I would nevertheless be understood, I am likewise a Votary for the very same Justice on *Cesar's* Side, whose Dues are equally his Right ; and therefore I shall here insert the Copy of a Letter written by a common Brewer in *London*, which I found amongst his Papers after his Death, viz.

Mr. ———

THIS is to inform you, that about eighteen Years ago, I set up the Trade of Brewing, and thought it not amiss to take all Advantages and Opportunities, to enrich myself by it, in respect of the Duty ; but after I had gone on in this Error, God was pleased after two Years Gain this way, to lay a great Affliction upon me in respect of my Health ; and being brought very near to the Grave in all outward Appearance, and being under the Apprehension of the awful Justice of the Almighty, I took in hand

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the Work of Examination more seriously ; and calling to Mind the Sins of my Child-hood and Youth, I proceeded to those of Riper Years, and of my present Circumstances ; and tho' before I thought it no Crime, to save what I could of the Duty, now Conscience tells me that it was a Sin, and a very great one ; because it's not rendering to *Cæsar* the Things that are *Cæsar's*, as our Saviour taught us to do ; and not doing to another, as I would he should do unto me. If I were the King or Governor, I would not be willing to be defrauded of what was given me, and becomes my Right by Law, (as this to the King or Queen of this Realm is) ; and our Saviour that said Render to *Cæsar*, hath in this taught us to be just to our Governors, as well as our Equals, and pay Honour to whom Honour, Fear to whom Fear, Custom to whom Custom, and Tribute to whom Tribute is due. These things being now set in a clear Light, I was brought to a Hatred of this my beloved Sin of Gain, was made to resolve against it, and have kept from the Practice of it ever since ; tho' you may be assured, it was as pleasing to me, as to yourself, before I saw it to be a Sin ; but seeing I went on in it but two Years, I do account myself obliged to make Restitution to the Government for it to the utmost Farthing. I send this to admonish you to do the same ; and tho' you may think it a hard Task, yet it's no more than what I put myself under ; for there can be no true Repentance without Restitution, where we have Ability to do it, as you and I have : And tho' you may say it will amount to a great Sum, it therefore calls the more for the Payment of it ; and if it comes to all you are worth, yet it's best to restore these ill-gotten Goods ; for what can it profit you or me, if we gain the whole World, and lose our own Souls : And therefore my Advice to you is, seeing you cannot reasonably expect to live much longer, to cast up as near as you can, all you have defrauded

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defrauded the Government of, all the time you brewed, both by whole Guiles, and Parts of Guiles, in making your Length short, and then making it longer with Small-Beer, and also by hiding and otherways, which you know best; but it would have been best, not to have known any thing of it in Practice. It's my Resolution, that when I can't follow a Trade or Calling without defrauding, I will lay it down. I think you have laid it down as to yourself, but that is nothing, unless you make Restitution for all your unlawful Gain; and warn your Sons that they do not the like, but immediately break off from these wicked Practices, which otherways will be both to you and them Gall and Bitterness at the last: And that it may not be too late, I send this to you, not to do you Hurt, but Good; not to make you Poor by restoring, but by restoring to make you Rich in Faith and Heirs of the Kingdom of Heaven; which I think cannot be, while you retain the Sin or the Effects gotten by the Sin, or uphold or encourage your Sons in going on in the same Manner; for which God has promised to visit the Sins of the Fathers upon the Children to the Third or Fourth Generation, and especially such Children as go on in their Fathers Sins, as your's do in this Sin of Covetousness in the highest Degree; but if you will not own it to be a Sin, I tell you you must own it now, or you will be forced to own it when it will be too late to repent, or make Restitution for the Wrong you have done in it. I preach no other Doctrine to you, than what I take myself; and having done what I thought was my Duty, and what I was bound to do, I leave the Event to him that disposes of all Things. But withal I desire you to do what you can to restrain all others, you know have been, or are in this horrid Sin of Fraud and Injustice.

C H A P. VIII.

A Receipt for Brewing Drink after the Shropshire Method.

WITH regard to the Ingredients or Materials of Brewing good Beer and Ale, three Things ought principally to be taken care of, viz. Good Hops, good Malt, and good Water. As to Hops, provided they are well pick'd and dried, the *Kentish* Hop is esteem'd for Strength, to equal, if not exceed any of our *English* Growth, &c.

The Water to be made use of, if it can be had, is best that comes off a Marl or Chalky Bottom, or River Water after a Flood, reserved in Tubs with Taps two Inches from the Bottom to draw it off clear from the Sediments; but in some Places as there is a Necessity, so there are Ways and Means of meliorating the Water by throwing Chalk into, or ramming the Bottoms of Ponds and Wells with clayey Marl, &c.

That Malt is esteemed best, and I think deservedly too, which is made after the *Nottingham*, *Darby*, or *Dorchester* Way, which for Fineness of Colour, Strength and Taste, exceeds all other. Having obtained these three Ingredients in Perfection, the next Step towards having good Drink, is to take care of the manner of Brewing, which is various and different according to the Usage of different Places: But one Way has been universally approved of in Places famous for good Drink. The Way is this: Having boiled your Water very well with a little Bran thrown into the Copper, in mashing up, put about three Pecks or a Bushel of your ground Malt into a Tub; then pour upon it boiling hot Water; then stir it till all the Malt is wet; then lift it into your Mash-Tun, and so proceed till your whole Quantity of Malt is wetted;

wetted; then let it stand three or four Hours; when you draw off, let it run from the Tap in a small Stream, sprinkling the Top of your Mash once in three or four Minutes with hot Water. By this Means you will not disturb the Sediment, and may make your Ale as strong or as small as you please. In boiling observe the breaking, &c.

From the Coolers to the working Fat, from thence to the Vessel, &c.

Remarks on the before-written Receipt:

This Gentleman, it's plain, intended out of an honest and generous Disposition to benefit the World, by letting them know his Way of Brewing as it is practised by himself, and several others; and I must own I have drunk Ale and Beer at his House free of any other Fault but two; and they were, the Liquor's not being fine in the Glass, nor clear of that nasty, bitterish, earthy Taste, that all Hops give Drink in which they are boiled too long. But to be more particular, I will examine his Receipt from the Beginning, where he says, that good Hops are necessary; and that the *Kentish* Hop is equal to, if not exceeds all others. This, I own, is my Opinion; but why a peculiar Commendation is due to the *Kentish* Hop, is to be accounted for: It is my Notion, that they have no more Advantage in their Soil, than those of *Hertfordshire*, and some other Counties; because, in both, as I remember, there are Sands, Chalks, Clays, and Loams. Their Situation almost alike hilly, or what may be called Chiltern Countries, a Title that distinguisheth them from the Vale Countries; so that I can't think *Kent* has any Preference on that Account: But I must be an Advocate for it on two others; and they are, first, That as *Kent* lies Southward from *London*, it certainly has a greater Influence of the Sun's Rays than *Hertfordshire*,

fordshire, and some others that lie more Northwards, which undoubtedly is a great Benefit to the Growth and Spirit of the Hop, as ripening them sooner and better; than those that have not such a happy Aspect, and are thereby delivered more from the Power of the cold Dews and Frosts that happen in the Beginning of *September*, to others which are gathered about that Time, and is prejudicial to them and many other Vegetables in some Degree by the Chill it gives them, which is the Reason that some of the Curious gather their Golden Pippens before they are thorough ripe, as rather having them a little shrievell'd, with a fine Spirit in them, than full mature, and damaged by the Cold; for the hotter the Weather is when they are ripe and gathered, the better it is for the Hop; and by the same Rule the *Southam* Cyder is stronger than any other in *England*; because the Fruit has a favourable Assistance from the Sun in this Southern Situation as well as the Root, that is obliged here to run shallow on the Marble Rocks, which indues the Fruit with a stronger Spirit than others are. Secondly, The Hop in this County of *Kent* may probably receive a stronger Spirit than others from the Effluvia of the warmer Air, that becomes more potent by the exhaled Vapours of the great Quantity of Salt Water, that I am apt to believe encircles near two Thirds of this County; and so I take it to be with what they call the Sea-Wormwood that grows on the Rocks about *Barnstable* in *Devonshire*; which is very Valuable for its Flavour and Strength beyond the common Sort that grows on some of our waste Grounds; and that by reason of its shallow Root, the Baskings of the Salt Waves, and the thin Warm Air or Vapour that arises from the Water, that is abundantly more subtle and finer than the gross Land Air; which undoubtedly impregnates this Vegetable with an excellent Spirit; as the *Kentish* Hop may also

also receive for some of the same Reasons. Yet some say the *Worcestershire* Hop excells.

He comes next to the Water, and praises a Chalk or Marl Bottom, or River Water after a Flood. To this I answer, he is right as to the first two; but as to his taking Water out of a River, presently after a Flood, and putting it into Tubs to settled before it can be used, I can't be of his Opinion; because while such Water is making its Sediments in open Tubs, the Spirit of it dies in some degree, and you lose the best Quality of the Water, which all Brewers in a singular Manner ought to employ their greatest Care to preserve; and that such Water has a powerful Vital Virtue, is evidenced (as I have in another Place observed) from that of the *Thames*, that is said to stink two or three Times in an *East-India* Voyage, and at last upon opening the Bung, will send forth a fine Spirit of an inflammable Nature: And therefore where it can be had out of a River pure and clear, I think it far preferable to use it directly, than to obtain it by the Tap out of Tubs, unless meer Necessity is the sole Reason for the contrary.

Malt is the other Article; and which he very justly allows to be the best of all others, when it comes nearest to the *Nottingham*, *Darby* and *Dorchester* Sort, which are dried with Coak; and therefore are excellent for their Strength, pale Colour, and Flavour; because the Kernels by this Sort of Fire are free from the unwholesome and unpleasant Quality of the Smoak, which all other Fuel in some degree or other taints the Malt with; and not only hurts it in them two Evils, but also with their more irregular Heats that all Fires are subject to, except Cinder and Welsh Coal, whereby the Malt is better made in some Parts of its Body than others; now the truer it is dried, the more and finer Drink it will make; and then such Malt is further improved in its Strength and Colour, by the sulphureous pale Effluvia, arising

out of the Coak or Culm: But this Effect in the latter is apt to be too strong and unpleasant.

He also adds, that boiling Water is to be poured upon three Pecks or a Bushel of Malt, first in a Tub, and after it is stirr'd, to be all put into the Vat, and so proceed doing the like by another Bushel, till all is put into the Mash-Tun. This is the Reverse of what I have taught in several of my Methods of Brewing; and it is my Opinion, that those who so universally (as this Gentleman terms it) follow his Receipt, it is because they know no better Way; for if he knew the *Nottingham*, *Darby*, and *Dorchester* Rules of Brewing, as well as he does the Nature of their Malt, he would I believe alter his Mind and Fashion; for in those Places they are Strangers to such a Hodge-podge Way, as being their chief Endeavour to keep the Malt, Goods, and Grains as light as possible in the Mash-Vat, or Tun, that the Water may have free Access to, and into all the Parts of the broken Malt, the better to extract its Quintessence and Spirit; and that they may do it gradually, they take special Care not to let the Water be boiling hot, when the Malt first unites with it, lest its fiery Violence, scald, lock up, and stop the Pores of the Malt, make it clot and cake together, and the most flowery Parts of the Malt run whitish, glewy, and fizy, like Paste; for when it so happens, their Hopes cease from obtaining good Drink that Brewing; because then the Malt will never mix kindly, nor give out its Strength to the Water. This is also proved in scalding of a Hog; where the Judgment of the Butcher is tried in taking his Water in such a Degree of Heat, as will cause the Hair to come off easily; but if he lets it Boil, it will rather set and fasten it on: Nay, the *Nottingham* Brewer is so tender in this Article, that after he has put a Bushel of dry Malt, over five that have been just mash'd to keep the Spirit, in; tho' it has lain

th us

thus two or three Hours, yet he dares not let his Water be boiling hot, that he first lades over, lest it scald and spoil that Bushel; but takes care that it want several Degrees of that Heat: And when it is thus wetted, he then boldly puts over his Jets or Bowlsfuls of boiling Water; for then all is out of the Power of this Sort of Damage. It's true this mixing of the Malt with boiling Water first in a Tub, will prevent its Balling, or gathering together in Heaps, so that the Water can come to all its Parts (which is the chief Reason, I suppose, that this Way was first invented); but then it must consequently bring all into what I call a Pudding-Consistence, that will cause the Malt to lie so close together, that the boiling Water afterwards can't have a free Circulation to all its Parts; nor can its Goodness then be got out so regularly and easily, as if it lay in a looser Mass; and therefore to supply this Misfortune of Balling, I put in the Malt very leisurely upon the Water in the Mash-Tub, and stir it, as I have already directed in the Chapter of Brewing Wheat-Malt, where the rest of his Receipt is fully answered.

A Receipt for Brewing a Drink according to a Method used in Philadelphia in Pensilvania.

Take five Pounds of Molasses, half a Pint of Yeast, and a Spoonful of powdered Race Ginger. Put these Ingredients into your Vessel, and pour on them two Gallons of scalding hot, soft, and clear Water; then shake them thoroughly well together, till it ferments, and add thirteen Gallons of the same Water cold, to fill up your Cask; let the Liquor ferment about twelve Hours, then bottle it off with a Raisin or two in each Bottle.

This was given me by a Person, who says that a pretty wholesome cheap Drink for quick spending, may be made after the Form of this Receipt: But as I never yet tried it, I leave the Proof to those that may think fit to make use of it.

Another from South-Carolina.

I lately had an Information from a Person who lived six Years at *South Carolina*, and belonged to one of his Majesty's Ships of War there, that they have no Malt-Liquor, but what comes from *London* or *Bristol* at 10d. per Bottle. As for their common Drink, a Table-Beer, he says its very good, but apt to purge those that are not accustomed to it upon their first drinking it; and if very new, as they are forced by Necessity sometimes to drink it so, it makes them very Sick: It is made in the following Manner. — They make use of no Malt or Hops, but take a sufficient Quantity of the young Pine Tops (which they have growing in great Plenty in the Woods there, and from which Trees is procur'd the Turpentine, they deal so largely in,) and boil them in Water for about an Hour, or till the outward Skin or Rind peels or slips off; then they strain the Liquor; to which they put a sufficient Quantity of Treacle, (the Quantities he could not inform me) or Molosses, which they boil for some time; then cool it a little, and put it up in their Vessels, which they call Punchins, and so work or ferment it, being Strangers to Yeast. They take some of their Potatoes (which are of three Sorts, the yellow or Brimstone as they call it, the Red, and Brown; there are some of them a Foot or more long, and are very sweet in Taste almost like to our Parsnip, (but the Natives prefer the *Irish* Potatoe to eat with their Meat.) These they cut into Pieces very small, and mash them; then put them
into

into their Drink, which works it very well, and their Sweetness gives the Liquor an agreeable Relish ; for its apt to be a little too bitter from the Pine-Tops, which are very strong, but very wholesome ; tho' when they can get Spruce (which is somewhat scarce, and grows among the Rocks) they prefer that Drink before that made with the Pine, both for Wholesomeness and Pleasantness. They preserve the Grounds for to accommodate Persons, as we do our Yeast, that are Brewing.

A Country Victualler's Way of Brewing.

He has two Mashing Tubs, one that will mash four Bushels, and the other two ; and one Copper that holds half a Hogshead. The Water, when boiled, is put into the biggest Tub, and a Pail of cold Water immediately on that : Then he puts his Malt in by a Handbowl full at a Time, stirring it all the while, and so on in a greater Quantity by degrees : (for the Danger of Balling is mostly at first) till at last he leaves half a Bushel of dry Malt for a Top-Cover : Thus he lets it stand three Hours. In the mean while another Copper of Water is directly heated, and put as before into the other Mash-Tub, for mashing two Bushels of Malt, which stands that Time. Then after the Wort of the four Bushels is run off, he lets that also of the two Bushels spend away, and lades it over the Goods of the four Bushels, the Cock running all the while, and it will make in all a Copper and half of Wort, which is boiled at twice ; that is, when the first Copper is boiled an Hour, or till it breaks into large Flakes ; then he takes half out, and puts the remaining raw Wort to it, and boils it about half an Hour till it is broke. Now while the two Worts are running off, there is a Copper of Water almost scalding hot made ready, and is put over the Goods or Grains
of

of both Tubs ; where after an Hour's standing, the Cock is turn'd, and this second Wort boiled away, that he again puts over the Grains of both Tubs to stand an Hour ; which when off, is put into the Copper and boiled again, and then serves hot as it is instead of the first Water for mashing four Bushels of fresh Malt ; where after it has lain three Hours and is spent off, it is boiled ; but while it is in the Mash-Tub, a Copper of Water is heated to put over the Goods or Grains that stands an Hour, and is then boiled for Small Beer. And thus he brewed in all ten Bushels of Malt as soon as he could, with two Pounds and a half of Hops for the Whole:

Another,

Whose Copper holds about twenty Gallons, makes half a Hoghead of Ale off four Bushels of Malt, thus : He just mashes the first Copper of Water, and lets it stand three Hours before he draws it off, which he reserves in a Tub with Hops ; then having another Copper of boiling Water ready, he lades that over, a Hand-bowl full at a time, keeping the Cock continually running till all is off ; then he boils this second Wort first with Hops till it breaks ; when he takes half out, and puts the first Piece of raw Wort to the rest, and boils away again till it breaks ; then makes a Kilderkin of Small-Beer without any Hops, which when cold, he puts one Pail of cold Water to it to keep it from souring, and the next Day it is heated, and serves for the first Liquor towards brewing four Bushels of fresh Malt next Day, and at last makes a Kilderkin of Small-Beer. By which Method he pays no extraordinary Excise. — While the Wort is boiling, this Brewer for some time lades it up and down with a Hand-bowl, believing this Motion contributes much towards making the Wort break the sooner.

C H A P. IX.

*A Dissertation on several Parts of the
Brewery.*

ANOTHER, to brew four Bushels of Pale Malt, useth one Pound and a half of Hops thus: He rubs them well between his Hands, and then cools a little Wort, in which he wets them all; then puts them into a fine Net, and boils them only twenty Minutes, but his Wort longer till it breaks; by which he enjoys a fine palatable Liquor, fit to drink at a Month's End. — Remarks on the same — First, He is certainly right in using that Quantity of Hops to four Bushels of Malt, even for common Ale to be drunk in a little time; because as the Pale Sort is the most luscious of all others, there is required no less than so much. Secondly, And to have the purest spirituous Part of this Vegetable in a little While, he is no less judicious in rubbing them first; for by such Friction they are put into a Condition of imparting their Essence more freely to the Wort in a little Time. Thirdly, his Method of soaking them first in cool Wort is good; for if Hops are put directly into boiling Wort, as the common Way is, you may then expect the Pores of them to be locked up and scalded by the astringent Heat of the Liquor, and thereby hindered emitting so much of their Virtues as is necessary in that Space. Fourthly, his Management in boiling the Wort longer than the Hop, and till it breaks, is a most sure Way of giving a Cure to both; for you may depend on it, if Worts are under or over boiled, they are not rightly brewed. If under, then it will not work kindly in the Vat, nor fine truly in the Barrel, nor taste pleasant in the Glass. If too much, its viscous Parts will not thoroughly break by Fermentation; — For

For by too long boiling, the Body of the Wort gathers into a thicker Consistence than it ought to have and when very much boiled, it's apt to fox, or become ropy in the Cask, and thereby subject to the Breed of Worms while it lies in the same. Fifthly, This may then justly upbraid the old erroneous Way that some are guilty of, who boil all their Beers and Ales by the Hour Glass, or in plainer Terms, in the Dark; for 'tis impossible for the Art of Malt to adjust such Boiling by that Rule, or any other, except the Eye; because one Sort of Malt won't break so soon as another, nor will one Sort of Water admit of it so soon as another, nor will — a slow Boiling so soon as a quicker; and the Reason for such a wrong Method of Brewing was occasioned two Ways: One by the general Custom of the Times; and the other by the Difficulty that attends such an Observation in the great Copper, where the Curb is put up, and the Top of it is four or five Foot higher than the Wort, that leaves only a narrow Vent for the Steam to ascend out by; and then such Wort that is under or over boiled, by Consequence can't be so wholesome as that boiled to its true Crisis, by Reason it is not of so easy and natural Digestion; but like the Extrems of under or excessive boiled Meats, will not fail to disagree with the Constitution of the Body in a degree; and if such Brewers happen right, (as undoubtedly they sometimes do) it's more by Chance, than Cunning. But then where is the Prudence of those who have the Convenience of Buying or Brewing right Drink, and yet lay out their Money all their Year in bad Malt-Liquors, without regard to their precious Health (the greatest Jewel in Life) and the considerable Profit that may be obtained in saving the Excise; and how a Family may brew their own Drink in a little Room, and with a few Tubs, I think I have amply shewn in my first Book of the London
and

and *Country-Brewer*, besides many other serviceable Curiosities that since have been proved by those I never saw or knew, and their Praise sounded at the Booksellers Shops, &c. for the same. And as I have both in that and this Book detected the horrid Practice of beating great Quantities of Yeast into Ales, to the great Damage of the human Body; and also exposed the common but considerable Loss that Thousands fall under by Clay Bungs, I shall here only enlarge a little farther on the last. It's true, that these Bungs are certainly a very great Convenience to some Brewers, by being ready to supply the Place of better with little Trouble and Cost: But if a Person will but consider the several ill Effects attending the same, I am of Opinion, he will no longer suffer such a prejudicial Companion to be close to his Drink. For these are the Words wrote in *Dr. Quincy's Dispensatory*, page 223 — viz. "We must consider that Clay is a mineral
 "Glebe, and that the gross Particles, and Metallick
 "Salts with which Waters passing through such a
 "Bottom do abound, are, as *Dr. Lister* observed,
 "not to be mastered; that is, indigestible in the
 "human Body; not only therefore will these cause
 "as he well argues, calculous Concretions in the
 "Kidneys, Bladder, and Joints, and as *Hippocrates*
 "experienced hard Swellings in the Spleen; but
 "they must necessarily oftentimes, by their corrosive
 "Quality, twitch and irritate the sensible Mem-
 "branes of the Stomach and Bowels; and thus hin-
 "der and interrupt the Digestion of our Food. Nay,
 "besides all this, when they come into the Blood, it is
 "no wonder if the small Canals of insensible Per-
 "spiration, are frequently stopt up, and obstructed
 "by them; for it is upon this score, that *Sanctorius*
 "teaches us in his *Medicina Statica* Sect. 2. Aphor. 6.
 "that heavy Water converts the Matter of Tran-
 "spiration into an Ichor; which being retain'd, in-
 "duces

“duces a Cachexy ; what Mischiefs will ensue here-
“upon, every one sees, not only Pains in the Limbs,
“Livid Spots in the Surface of the Body, Ulcers,
“&c. from the Acrimony of the undischarged Moi-
“sture ; but many besides of those perplexing Symp-
“toms, which go by the Name of Hysterical and
“Hypochondriacal, that may take their Rise from
“the same Source.” — By which it may plainly
appear what pernicious Consequence the Nature of
Clay is of ; but least there are not enough ill Pro-
perties in the Water, that is taken out of such stagna-
ting Wells, whose Bottoms are a Clay, and with
which many Thousand Barrels of Drink are brewed,
truly, there must be an additional Evil, by a Heap or
Pat of Clay on the Bung-hole, which by the jolting
of the Dray Carriage, is often wash'd for some Miles
together into the Vessel, where it afterwards subsides,
and becomes a Share of the Feces that such Drink
feeds on ; by which its Essence is conveyed into the
Body by the Vehicle of such Beer or Ale. And
as a farther Proof of the metallick, saline Parts
contained in Clay, we may only observe the glazy
Quantities that run or gather from it, by the Ve-
hemency of the Fire wherein Bricks are burnt, that
are made with the same Earth. And therefore in
time, the discerning Part of the World will explode
so nasty, and unwholsome a Thing from being used
about their Casks of Drink, not only for the above-
mentioned Reasons, but also for several others that I
have mentioned in my first Part, and particularly for
one I never yet took Notice of ; and that is, when
such Pats of Clay are much mixed with the Yeast,
that works sometimes several Days together through
the Hole in its Centre, and remains on the Bung-hole
a considerable while, there is apt to breed, as I
have seen many times, several Worms from the Heat
of the Weather, and the putrifying Natures of the
Clay and Yeast ; But what the Eye sees not, the
Heart

Heart rues not ; for so it generally is when Servants have the Bunging and Unbunging of such Casks of Malt-Liquors, and thereby passes unobserved by the many Customers. In this Case the Country People are most sagacious, where many who live among Plenty of red Clay, refuse any Application of this Sort to their Casks : On the contrary, they constantly use the Bung I have writ the Dimensions of in my first Book, and follow the right Method I have there mentioned of managing the same. pag. 3. These Considerations lead me still further to make Observations on the three Principles of Water, Malt, and Hops. And first of *WATER*

In my Brew-house, there were used two Sorts ; one the New-River, the other a Well : The New-River I must own is the best Sort that *London* affords for brewing, which was kept in a Recevoir or great Cistern, containing about thirty or forty Barrels under Ground, over which was a Wooden Floor, where a Firkin-man filled his small Casks of Beer three-times a Week ; and as I remember, this Cistern was never cleaned in my Time ; for it was thought there was Business enough above Ground : But no Matter ; Who sees our vasey, muddy Sediments, that often encreased by the Foulnesses of new Supplies, and subsided at the Bottom ; where it from time to time tintured the succeeding Quantities of fresh Waters with its corrupt, unwholsome Qualities that keep Company with the Beer or Ale made with it to the last ; notwithstanding strictly speaking, all Brewing Utensils should be as neat as any used in Dairies, and accordingly are kept so by many, those that Brew their own Malt-Liquors especially. However it was thought good enough to Brew with, and relax the hard burnt Corns of the unwholsome Brown Malt. And for the Pale-Sort, we used the sharp, hard, stagnated Clay Well-water, that was thought most proper to extract the Quintessence out of this tenacious,

tough Grain. I have used the *Thames* Sort in Brewing to a considerable Advantage; I mean in making a greater Length of Drink from Malt by this Water, than any other would do in *London*; but how agreeable this was to the Health of the Drinker, if taken in the worst Part of that River, (for the best Town is a good Water) I leave to better Judgments. I shall only relate what a Person told me he tried on this Account; and that was when he was Journeyman to a Distiller, and his Master Abroad, he took the Opportunity of satisfying his Curiosity, by charging the Still with about 100 Gallons of *Thames* Water, and had for his Satisfaction only one off that he tasted, but soon spit it out in haste, as being of an unsufferable, nasty, brackish, muddy Relish. Another Case was that a Maltster living within a few Miles of *Dunstable*, was reported to have the best *October* Beer, by making use of his Horse-pond Black-Water, and accordingly it was taken by the Country for an Orthodox Story; and for what I know, it may have led others into an Error of using the same unwholesome Sort, in hopes of having the like fancied Success. But was I to act only as an Hear-say Author, I should certainly be very culpable as well as they, and more so as the Propagator of such considerable Damage, instead of detecting Errors, and directing profitable Methods. But to do the World Service on this Account, I shall here declare how a Person may brew with foul Water, (the Clay, Allom, and some other Mineral Sorts excepted) and yet have found Beers and Ales, viz. — When you are confined to use a troubled, muddy, greenish, or even an ill sented Water, as many are in the Country, who have no other Supplies than what Ponds or Ditches, Cisterns or Tubs, afford, that generally, in dry Summers, become stagnated, and often contain in them many small Worms and other Animalcula. I say, in such a Case, boil your Water;

Water; and while it is heating, throw half a large Handful of common Salt into a Copper of it, that holds a Barrel; and as the Liquor grows hotter, there will a Scum arise, which must often be carefully taken off, till no more appear: Then put such your boiling Water into the Tun or Vat; and when cooled by a Pan or two of cold, run your Malt on it by degrees, as directed, and you'll find that such foul Water will not only produce you a sound Wort, but also a white Yeast. For I am often forced by Necessity to brew with such Water, having only a Current out of the common Road that feeds my Ditch, and that Pond in my Garden. How happy also should the *Londoner* think himself for the Communication of this most serviceable Secret, on account of the *New-River*, *Thames*, and *Hampstead* Waters, that are very apt to run foul on great Rains, and Winds; but by this salubrious Antidote are obliged to throw off their otherways foul, nasty Fæces or Sediments, by a Scum that is hereby easily clear'd off before it passes the several Digestions of the Mash-Tun, Back, or fermenting Tuns; which when the Water was in such an ill State, neither I, nor the Workman that brewed for me, took any Measures to cure this grand Evil; for indeed to say the Truth, I then had no Notion of the ill Qualities of these sæculent Parts and Scums; tho' if we will but employ our Reason, there may be a true Conception easily made of both their unwholesome Natures. The first shew themselves to be the earthy, valsey Parts of the Water, by their ponderous Subsidence; for whenever there is sufficient Time and Opportunity allowed them, they will not fail to become a Body of Fæces at the Bottom of any Vessel that contains them. The second results from the first, as being the more light and frothy Part of those Fæces or Sediments, and are raised or separated from them, by the Agitation of the fiery Particles of the heated Water

Water and Salt ; and is of such Consequence to avoid, that every old Woman that can cook herself a Bit of Meat, will be sure not to be wanting in her Care of Salting the Water, and Despuming as fast as it appears, lest its pernicious Nature corrupt both her Meat and Soop, by being boiled into the same. And shall the Brewer be wholly regardless in this Matter, tho' he has a Thousand times more Reason ; because he has more than a Thousand times the Quantity of thick, troubled Water to use and prepare for the most noblest Body in the World, even that which is humane. But so it is through a long Series of ill Custom and Ignorance, that this is become one of the least regarded Articles by many in the common Brewery. For in Truth, I never knew one of them in my Life that ever attempted to take off the Scum off the Water or Wort. On the contrary, when I have argued with a common Brewer, near me, of the horrid Nastiness of such Fæces or Scum. — Oh ! says he, I matter not how foul my Water is, since I can bring my Wort off from my cooling Back, as fine as I please. — And really so it was, that by this Means my Customers were gulled out of any Scrutiny concerning the Water that they brew'd their Drink with ; for if they could see the Liquor fine in the Mug, or Glass, all Questions about the Water and Scum were hardly so much as once thought on ; tho' in Truth, nothing belonging to Malt-Liquor deserves it more, and therefore I shall here observe the Absurdity of this Brewer's Answer. — Does he not hereby as good as tell us, he cares not what the Nature of the Drink is, so it take the Eye and Heart of the Drinker, and excuse him from any Suspicion of Fault, tho' at the same time, in Fact, such a one is no less than his own Proficient at the Expence of my Health ; for such as the nasty Nature of such Fæces and Scum is, so much is the Drink tinctured with its Quintessence and unwholesome Qualities, by being boiled
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all together, and thereby so united, as that neither Fermentation, nor Age, can ever disunite or separate such its ill Properties, while the Drink indures; because it is the Nature of Ebullition to conjoin and astringe the Parts of all Ingredients that come under its igneous Potency. This may also serve as an Answer to all those who are so vain to say, they value not any Foulness of Water or Wort, for that Fermentation will clear it, and throw off all by the Yeast. A poor Shift indeed, tho' a very common one. But how much the Health of the Customer is concerned in such Management, I leave to the Judgment of the Reader. In the next Place I am to observe, that to the nasty Fæces or Sediments of the Water, there are often added those of the Malt; for in my Brew-house, where we brew'd 5 times a Week, it is not to be supposed that we could give the Wort a due time to make its Sediments in the Backs, nor Leisure enough to run it off by the Cock in such a small Stream as was requisite to drain it fine into the working Tun; so that here both the Fæces of the foul Water, and those of the Malt were joined together in some Measure, and in this Condition work'd and fermented all Night till the Morning, when we sold perhaps twenty Barrels by the Gallon; that is, by Pails and Tubs, at 2d. and 2d. half-penny per Gallon. The rest we sent out by the Dray; but how wretchedly unwholesome must that O Economy be, where such new Malt Beer was drunk the same Day it came from the Brew-house, or the Day after, as I have known many do, before it's well done working; they not considering that the human Body is a Sort of Alimbick that distils or separates the pure from the impure, and then what must become of the grouty, yeasty Fæculent Parts of such a Compound nasty Liquid. Is not this enough to lessen our Wonder, when we see many, of the Town born especially, look with white Faces and pale Lips, attacked with frequent Cho-

Cholicks, eaten up with the Scurvey, and emaciated by lingring Consumptions, that undoubtedly are often the Effects of bad Drinks; which by Consequence make large Lodgments of Corruption in the humane System, while they stuff and load it annually with innumerable Draughts of Dregs and Foulnesses contained in such thick unsettled Drinks. But I wish I could end here, and had no further Reason to imploy my Pen in exposing this bad Husbandry, that extends itself too often to the Gentleman and Tradesman's Cellar, where the Barrel, Kilderkin, or Firkin, is taken in for Family Use: Here then by the Mismanagement of the Servant, or through Necessity of having none but one Cask to tap, the Vessel is set a running before it has had time to clear itself; and then there are little Hopes left of Drinking fine Beer out of that Cask. This was often the Case with several of my Customers, tho' it is certain no Malt-Liquor whatsoever can be good and wholesome if it is not truly clear and fine, and I think I may justly add, if it is not free from all nasty Fæces that too often lie at the Bottom of Casks, in more than small Quantities, and tincture the Drink with their bad Qualities; but some there are who vainly fancy that Beer, (especially the aged Sort) ought to have something to feed on, otherways say they it will soon grow sour. To this I answer, that neither Beer nor Ale can be drawed off so fine from the Mash-Tun or Cooler, as to want a sufficient Sediment to feed it, as may be easily proved by an Observation when the Drink is drawn off, that never yet appeared to me without rather too much of this filthy Compound, which by its earthy and saline Parts naturally induces Hardness and Eagerness in the Liquor. And altho' Ale and Beer, loaded with such Dregs may become fine in time, yet is such Drink more liable to be disturb'd on Change of Weather, than that which is more free from such an ill Companion, and that by Reason the Particles of the Atmosphere

sphere hovering about the Cask, will not fail on certain Seasons to join those in the Cask of their own Nature, and raise a Sort of Fermentation, to the great Disturbance of the Drink. And this Contact is more or less influenced, as the Cellar is of a dry or damp Nature. If it is a Chalk, Gravel or Sand, then it's best brewing in *October*, to give the Drink time to pass its Digestions in the Barrel before the Summer comes on: But if a Clay or any Water is apt to ouze, and stand in the Bottom of a Cellar, then *March* is to be preferr'd, that the Malt-Liquor may make its Sediments go through its Digestions in the Barrel, and get a fine Body before the Austerity of the Winter, renders such a damp watry Place too chilly by the frequent Interruptions of Frosts and Thaws. To this Purpose also some are so curious, and that in my humble Opinion with a great deal of Reason, to brew their pale strong Beers in *March*, on account of the lesser Share of Fire that such Malt has in it, than the brown Sorts, and therefore requires a whole Summer to meliorate and ripen it directly after its Brewing: But with the high dry'd Brown Sort, it is otherways, by reason of the great Quantities of Fire used in its drying or rather parching, whereby it is the more fitted to agree with any of its contrary Principles, as the damp, cold Seasons of a succeeding Winter, which relaxes and better reduces such Drink to a Melioration. It is this then that induces a sagacious Person to brew all his Brown strong Beers in *October*, that they may have their Cure before the Summer comes on. *N.B.* But observe, that you don't put too much Salt into the Water you brew with; if you do, it will certainly stale it very soon, and leave a Drought behind, instead of quenching Thirst; and when you use any, there should be more Hops put into the Wort to ballance the hard stale Quality of the Salt in the Drink, or rather my alcalous Balls which are excellent to keep off Acidity,

dity, and preserve it in a mild, sound Condition; or some of those Receipts may be made use of which I intend to publish in my next Book that will answer somewhat of the same Purpose.

C H A P. X.

*An eminent Physicians's Way of Brewing Ale
and Beer without Boiling.*

THIS paradoxical Method has for some Years past gained but little Reputation in the World among the ignorant, opinionated, and self-interested Part, whose Tenets are so attach'd to Particulars, that a general Improvement can seldom get footing till Time and Custom paves its Way by the Example of the truly wise and impartial, who suspend their decisive Judgments till they have brought a Matter in Question to the undeniable Test of a demonstrative Experiment, and scorn to condemn a Thing (that has any Shew of Reason on its Side) by meer Speculation; for as he has justly observ'd, those who are wedded to Tradition, and their own Humour, give little Hopes that Reason will sway their bigotted Perverseness. But to prove the Rationale of this new Method, he has made several Remarks as a Student in Physick on the Animal OEconomy, and says, that as our Bodies suffer a daily wasting by our innate Heat, Perspiration of the Spirits and Humours through the Pores of the Skin, and the Impressions of the ambient Air, there is required a daily Recruit of Nourishment. To this end the Variety of Foods and Liquids are to be considered as they are more or less healthful to our Bodies; and as the Stomach is the Agent that digests all Meats into a milky Substance called Chyle, which passing into the Guts, meets with two different Juices from the Gail and Sweet-bread, that being

mix'd

mix'd together, create an Ebullition or Fermentation, which further perfects the Chyle, and is sucked thence by the milky Vessels, and carried through several Receptacles till it mixes with the Blood, which returns its Nature and Nourishment to the Heart, whose Pulsation drives it into all Parts of the Body. And being thus intermix'd with the Blood, it is at length transmuted into it, like the former.

The Blood being thus made out of Chyle, is by the Arteries conveyed to all Parts of the Body for their Nourishment: But the most pure and spirituous Parts ascend up to the Brain (where out of it the Animal Spirits are made) being the Seat of Fancy, Reason, Judgment, and Memory; for from the Brain are all the Nerves or Sinews divided into all Parts of the Body, which cause its voluntary Motions, as Walking, Standing, Labour, &c.

First then if our Drinks or Meats be either improper in Quality, or too great in Quantity; in either Case it disturbs this curious OEconomy, Excess in both laying the Foundation of most Diseases; for every thing delighteth to produce its own Simile. Therefore all unwholsome Meats and Drinks are incapable of being converted into a pure and healthy Blood; but will in time acquire a Sharpness or some other evil Quality; which being carried to the Brain, clouds it with Vapours, interrupts its noble Faculties, and by often Repetitions makes a Magazine of corrupt Humours: By which it appears, what vast Importance good Meats and Drinks are of for securing Health of Body, and improving all our intellectual Faculties; because the Passions of the Mind follow its Temperament; for such as the Dyet is, such will be the Blood. To this Purpose this ingenious Gentleman declares, the first Step towards the Generation of the Stone, Gravel, Gout, Consumption, and many Diseases is the drinking strong, hot, sharp, intoxicating, stale Liquors, and fiery prepar'd

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Drinks,

Drinks ; as Beer high boild with Hops, Brandy, Rum, old Wines, which for the most part tend towards a hot sharp Spirit, and breed a hard gritty Substance in the Passages and Ureters, and burn up the radical Moisture. Which to prevent in the succeeding Generation, it is now practised by several of the great ones, to confine their Children to select Dyets, consisting chiefly of Puddings, Soops &c. but little of any Flesh ; and to that Degree, that I have known a Boy and Girl petition the Servants for a Morfel of a Fowl. This is done in order to prevent a Lodgment in their Bodies of those pernicious Scorbutick Salts, that all Flesh abounds with : And so in their Drinks they are not less curious.

Secondly, The boyling Hops two, three, or four Hours in Beer, is a Thing of pernicious Consequence ; because this Usage destroys the mild, opening Qualities of the Drink, and in their room institutes and impregnates the Wort with a harsh bitter astringent Nature ; and when Hops and Beer are so boiled, they prove very injurious to several Constitutions ; especially those inclinable to the Stone, or Gravel, by their extraordinary restraining Operation.

Thirdly, That the boiling of Wort, or any spirituous Liquor that is extracted from things whose Body is opened by Fermentation, as Malt is in a very high Degree ; does not only destroy and evaporate the fine, thin, subtle Spirits, which are only capable of Penetration ; but it does as it were fix or stagnate the whole ; by which it becomes of a grosser, fuller, or stronger Taste in the Mouth, which through Custom and Ignorance is esteem'd a Virtue, but the contrary is understood ; for thereby it becomes of a heavier Operation, lies longer in the Stomach, and sends gross Fumes to the Head, which is obvious by tasting unboyled Wort, and that boiled with or without Hops, and you'll find that this last has not only
lost

lost its pleasant sweet Taste, but its opening, penetrating Virtues by which it becomes of another Nature and Operation, which Fermentation does in some Degree help, but it cannot regain those fine, thin, soft Virtues that it lost in boiling, the fierce heat of the Fire being an utter Enemy to all spirituous Drinks, Liquors, and Cordials. It is also to be observed, that unboil'd Ales and Beers do generally drink smaller in the Mouth, than that which is boiled; because its spirituous, sweet, Balsamick Qualities, are not so much destroyed, suffocated, or stagnated by the igneous Particles of the Fire as the other; but it most naturally warms the Stomach, and is not so subject to send Fumes to the Head, runs thro' the Body quicker, purges more powerfully by Urine, which are naturally Testimonies of its Virtues, and that the better Parts are preserved in the Preparation. It's also to be observed, that all Drinks made without Fire, altho with raw, crude Fruits, Apples, Grapes, and the like, as Wine, Cyder, and many other Sorts, are not only more spirituous and brisker in Operation, but also more cleansing and penetrating if Order and Temperance be observed. But note, that all fermented Drinks are much better and greater Preservers of Health when new, than Old or Stale; for Age turns their mild Virtues into hard, inflammable, and keen Properties; for this Cause, all Stale Beer, old Wine, and Cyder, are far hotter in Operation than new, and consequently more prejudicial to Health, especially in the Gout, Gravel, Stone, and Consumption; therefore those who would drink Beer and Ale more wholesome and Homogeneous, may observe the following Rules, *viz.*

First make your Water or Liquor near boiling hot, then put so much into your Mash-Tub, as will wet your Malt; stir it, and let it stand half an Hour; then add your whole Quantity of hot Water that you purpose to put up for the first Time, and let it stand

stand an Hour and an half; but if you would have your first Wort very strong, then two Hours if the Season be not hot; then put what Quantity of Hops you think fit, into your Receiver, and let your Wort run on them; and after your Hops have infused an Hour and an half in your Wort, then strain it off into your Coolers, and you have done with the first Wort. Then put upon your Malt your second Liquor near the same Heat as the first, and let it stand only one Hour at most; then take what Quantity you please of fresh Hops, and put into your Receiver as before, and let your second Wort run on them; then take both second Wort and Hops together, and put up into your Copper; there let them infuse till your Wort is near boiling, but not boil; then strain this also into your Coolers, which you have done with also. Now if you will make Small-Beer, put what Quantity of Cold Water you think fit on the Grains, and let it stand half an Hour; then run it off to some fresh Hops, and put both this third Wort and Hops into the Copper as you did the second, and let the Hops infuse till they are near boiling; then strain it into your Coolers, and you have done. But remember that your Water never is to boil; for Boiling irritates and evaporates the subtle, fine, penetrating Gas or Spirit; and then the Water becomes more harsh, hard, fixed, and dead, which renders it not so capable to draw forth or extract the sweet Virtues of the Malt; to prove this boil a Quantity of River Water, put it into another Vessel, and let it stand a while; then take a like Quantity of cold, and put into another Vessel, and let that stand the same time as the other, and you'll find the boiled Water to stink, and never be sweet again; but your Water, which remains intire not touched with the Fire, will also putrify, or rather ferment; but then it will recover and become sweet and good for any Use as before.

Again,

Brewing Ale and Beer without Boyling. 71

Again, Tho' I have mentioned the making of Small-Beer after the Ale, I would here be understood, that all such Beer is injurious to Health, and the common Drinking thereof, does generate various Diseases, especially the Scurvey; because in the Grains is left nothing but a terrene gross Phlegm of a tart sour Nature, which incorporates with the Water; and to make it much worse, it is generally boiled with the Dregs of the Hops, which have been boiled several Hours before in the first and second Worts, that still encreases the Mischief: However, of this I have amply wrote in my first Book.

The Quantity of Hops for Beer, if you propose to keep it half a Year, or a Year, ought to be six or seven Pounds to a Quarter of Malt; but for Beer or Ale that is to be spent presently, two, three, or four, to eight Bushels will suffice. Tun your Drink young, that is, as soon as it works, put it into your Cask, and it will be much wholesomer than if it ferments too high before. And as to Boiling of Worts after they are drawn from the Malt, I do aver, (says this Gentleman) that it is not only unnecessary, but mischievous for the foregoing Reasons; 'tis not Boiling, but a due Fermentation that makes excellent generous Liquors. Malt passes through three Digestions: First, by the Sun and Elements. 2dly, by its being made Malt; and, 3dly, by its Infusion in Water, and needs not a fourth by boiling; for tho' I say it is to be heated, it is not to correct its Rawness so much, as to fit it the better to extract the Virtue out of Malt; which being once effected, all our Pains in boiling is superfluous; because this Drink has passed through all the Digestions and Fermentations necessary to its Conservation, and will keep accordingly; for I have made excellent Beer this way, that has kept twelve Months, tho' six Months is long enough: But if any are dubious of the Veracity and Benefit of what

is here advanced ; for their farther Satisfaction and Conviction, I refer 'em to Experience as the best Master.

CHAP. XI.

Sir T—S—'s Method of Brewing a Pipe of Pale Strong Beer.

TAKE three Quarters of the finest white Pale Malt, let it be ground not too fine, but just that all the Corns may be broke; let your Water be soft, running Rain, or Pond Water; boil it half a Quarter of an Hour, then lade it off into your Mashing-Tub; let it stand till you can just bear your Finger in it: Then put in your Malt by little at a time, keeping it stirring all the while: It will take half an Hour's Mashing in this Manner: When done, cover it up close, for two Hours and a half, or three Hours, returning it back into the Mash-Tub, till fine. At first letting off, put in 14 Pounds of the finest Pale Hops, rubb'd in with your Hands, that they may not lie in Lumps, boil it to 20, not exceeding 30 Minutes, with as much Fierceness as possible, to be kept in the Copper; immediately after throw the Liquor off into the Cooler, straining the Hops clean out; let it be almost cold, not Blood-warm, before you let it down into your Working-Vat. One full Quart of good Yeast is enough for this Quantity; you may let it work one or two Days; then Tun it, keeping the bottom Sediment out; let it be fill'd up every Day for a Week; after bung it in three Weeks or a Month; it is sometimes near 12 Months before it is fine for Bottling.

The above Receipt was communicated to me by an honourable and generous Gentleman ; on which I shall only make this short Remark, that in my humble Opinion his Boyling the Wort but half an Hour with the Hop, is not agreeable, because it can't have its due Cure in so little a time, tho' the Hop has ; but as I have already writ, and intend hereafter to publish more on this Subject, I refer you to the same.

The Fraudulent Practice by short-Measured Casks exposed.

CASKS. — These are unavoidable Necessaries, and must be had at any Rate : Their Sizes in *London* are generally the Pin, Firkin, Kilderkin, Barrel, Hogshead, and Butt ; of which Number there are three that differ from the rest in Measure on a particular Account ; and they are the Ale Firkin of eight Gallons, the Ale Kilderkin of sixteen, and the Ale Barrel of thirty-two Gallons : The Small-Beer Firkin being nine Gallons, the Small-Beer Kilderkin eighteen Gallons, and the Small-Beer Barrel thirty-six Gallons : Now as there is a considerable Difference in the Measure of these three Casks, I think it but doing Mankind common Justice to take Notice of a horrid Fraud that was never yet exposed in Print, committed by some ill Persons concerned in the Small-Beer Brewery for many Years past, and that by carrying these Ale Casks full of Small and Ten Shilling Drink, instead of the Beer Casks, whereby many honest Customers have been imposed on to a considerable Damage. A particular Case or two I shall here mention as it in some Degree related to myself. My Father happened to serve a Clock-maker in *Fleet-street* for some Years with Table-Beer in Kilderkins, and other Casks, till at last he was supplanted by a Firkin-man, who by a villanous Invention imposed on them both in this manner, viz. He comes
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into the Shop under pretence of buying a Clock; and after he had agreed to the Price, he tells the Owner that he was a Brewer, and would furnish him with Drink till all was paid. To this the Clock-maker agrees, and the Debt was discharged in these short measured Casks, that generally wanted considerable of being full. Now this Impostor did not confine himself to this Way of cheating only, but was detected in several other sly, and notorious Facts. Once a Gentleman that was another Customer came to a certain Brew-house, where he took up his Drink, to enquire for him; but he being absent, told his Case to the Master Brewer, a worthy Person, that there was a Cask brought into his Cellar by two Men seemingly as a full one, but was truly an empty one or near empty, and at the same time carried another away from off the Stilling that had some Gallons in it. At another time this Monster in Iniquity, sold his Firkin-Trade to a Person for valuable Considerations, and presently afterwards went about and perswaded several of the Customers to take Beer of him again, to the great Prejudice of the honest Purchasers. And now as I have engaged my Pen so far, I will proceed to calculate what a Family, that drinks a Kilderkin of Ten Shilling Beer a Week, may suffer by such a Fraud, that wrongs the Customer of two Gallons in the Measure of the Cask, and sometimes another by the Vessel's wanting of full, which is three Gallons in all; and amounts to Tenpence per Week, or 2 l. 3 s. 4 d. per Annum; a Matter I think of Consequence, and calls for a strict Observation. But here I would be understood that I do not extend my Reflection on the honest Brewer or Firkin-man; for I have known a Firkin-man that would always not only send out lawful Casks, but full Measure, and scorn'd to be guilty of the least wrong this way: So likewise the Strong-Beer Brewers, who I believe are most of them Men of

strict Justice and Probity ; an Instance of one of them I shall here mention as it occur'd to my Knowledge from the Relation given me by the Brewer concerned in the Affair. — An eminent wholesale Victualler that sold Stout and other Stale Beer by the Butt and Hogshead to those new set up, who are often obliged to furnish themselves this way, till they can get a Stock of their own at a sufficient Age ; agreed with this Brewer for a Number of Barrels of Keeping Beer, on Condition he would let him have so many new Hogsheads as would contain all the Drink. Now in this Proviso, the Victualler had a sinister end, that the Brewer at first perceiv'd not ; for being acquainted with the Cooper that was to furnish them, he persuaded him to make them under Measure, that he might get a Profit by selling to the Customer a short Hogshead, instead of a full measured one ; and tho' he thus sold by the false Cask, he bought by the true gaged starting Barrel ; which happened afterwards to be discovered by the Brewer, who was so honest a Man, that he gave a large Sum out of his own Pocket to be distributed among those that had thus suffered, that they might have ample Restitution made for the Fraud committed by Means of his Cask, tho' unknown to him : I have been the more particular in the Relation of these Pieces of Knavery that they may be a Warning and Prevention to the Gent Tradesman &c. others how they deal with Men of bad Reputation, which this Firkinman generally had ; who, tho' he carried on his Frauds to a great Degree for a long time, lately died very miserably Poor and distracted.

But I can't yet discharge my Pen from this Sort of Imposition, by Reason that two considerable Small-Beer Brewers were also guilty of sending out these Ale Kilderkins, and Firkins to their Customers, one whereof declared that he had done it, but lest it off some Time ago, when he thought
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he had got enough (I suppose) to trust Providence by honest Measure. As to the other I don't know whether he ever did. A horrid Thing indeed for Persons sometimes to suffer not only by Drinks made with unwholesome Waters, Malt, Hops, and Yeast; but to compleat the Scene of Villany, must have short Measure into the Bargain, to a considerable annual Loss where there are two, three, or four Kilderkins consumed in a Week, as in some Families there are. Bad indeed it is, with the Customer who is damaged by such a Wrong; but worse it will be to him that commits it, who must die without true Repentance, if a Restitution is not made, and he of an Ability to do it; and how that can well be done to those that may be deceased in the Time, and others that he may never come at, I know not. However, with many who have a Convenience of Brewing their own Drinks, the Risque of dealing with such Men may be avoided, and you may please your selves several Ways by so doing. Yet where the necessary Room and Utensils are wanting, the honest common Brewer, who uses a right Method, may supply such best, and who I must own is commonly provided with the best of Coolers, Backs, Tuns, Room, &c. for this Purpose.

But lest I prejudice myself by enhancing the Price of this Work, in swelling it beyond its intended Extent, I must refer my Reader to the Third and last Part of the **LONDON and COUNTRY BREWER**, that I have now ready in Manuscript, and intend to publish in a short time. Wherein I shall give a farther Detail of several most useful and necessary Particulars relating to Malt, Waters, Worts, &c. with a new Plan of Brewing Malt-Liquors, besides many other profitable Matters not proper here to mention.

F I N I S.

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 A rectangular library stamp with a double-line border. The text inside is arranged in three lines: "MVSEVM" at the top, "BRITAN" in the middle, and "NICVM" at the bottom.

MVSEVM
BRITAN
NICVM

Forced
For it is plain that this ill forceable
usage in health-liquors, by beating the yeast
in them, clogs & debilitates the fine
penetrating Particles.